DOCUMENT RESUME

ED 146 418 08 CE 013 525

AUTHOR Welch, Frederick G.; Vincent, John J.
TITLE Evaluation of Funded Projects for Development of Vocational Instructional Materials. Final Report.
INSTITUTION Pennsylvania State Univ., University Park. Div. of Occupational and Vocational Studies.
SPONS AGENCY Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.; Pennsylvania Research Coordinating Unit for Vocational Education, Harrisburg.
BUREAU NO 19-6812
PUB DATE Sep 77
NOTE 112p.

EDRS PRICE MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS Curriculum Development; *Curriculum Evaluation; Evaluation Criteria; Financial Support; *Instructional Materials; *Material Development; Projects; *State Federal Aid; State Surveys; *Vocational Education
IDENTIFIERS *Pennsylvania

ABSTRACT

A project was conducted to examine vocational education curriculum materials developed through state and federally funded projects to determine principles and methods used and to examine strengths and weaknesses of each. A survey instrument was disseminated to all Pennsylvania schools with vocational programs. Consultants were utilized to develop selection and evaluation strategies. A telephone survey was conducted of twenty-one projects, and on-site visitations were made to forty-two selected project sites. Activities resulted in (1) a comprehensive listing of curriculum projects in the state from 1970 to 1977, (2) a breakdown of the amount of funding allocated for curriculum development, (3) the selection of various curriculum projects to be evaluated, (4) an evaluation of the degree of successfulness of selected projects (through use of a product assessment instrument), and (5) suggested guidelines for the development of instructional materials and funding patterns. Among the conclusions and recommendations is the observation that a more structured format for the implementation of funded curriculum projects should be developed to reduce cost and duplication and to increase educators' effectiveness. Appendixes include survey and visitation instruments, listing of project locations, product assessment instrument, and project newsletter. (JT)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED146418

Final Report

"EVALUATION OF FUNDED PROJECTS FOR DEVELOPMENT OF VOCATIONAL INSTRUCTIONAL MATERIALS"

Project No. 19-6812

Dr. Frederick G. Welch
Project Director

John J. Vincent
Project Coordinator

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The Pennsylvania State University
Division of Occupational & Vocational Studies
105 Rackley Building
University Park, PA 16802

September 1977

Pennsylvania Department of Education
Bureau of Vocational Education
Research Coordinating Unit

CE013525

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
Objectives	iv
Outcomes	v
Audience	v
Publications and Available Material	v
BACKGROUND OF THE PROBLEM	1
PROCEDURES	2
Mail Survey Results	4
Identification of Project Funding Breakdowns	6
Selection of Projects	9
Consultant Involvement	10
Number of Projects and Methods for Evaluation	11
Development of Evaluation Instruments	13
Telephone Questionnaire	13
On-Site Visitation Instrument	14
Product Assessment Instrument	15
CONCLUSIONS AND RECOMMENDATIONS	16
APPENDICES	
A. Survey Instrument and Letter to Administrators	19
B. Mail Survey Responses	23
C. Newsletter (First Edition)	31
D. Listing of Project Locations	35
E. Correspondence to Consultants and Meeting Agenda	37
F. Listing of On-Site Visitation and Telephone Questionnaire	40
G. Telephone Survey Instrument and Results	49
H. On-Site Visitation Instrument and On-Site Visits	54
I. Product Assessment Instrument and Projects to be Evaluated	63
J. Consultants Position Paper	70
K. Edition of Newsletter	95

ACKNOWLEDGEMENTS

The authors wish to thank the Senior Program Specialist and Program Specialist in the Department of Vocational Education, as well as Mr. Norman Orndorff, Administrative Officer, Bureau of Vocational Education in Harrisburg, for their cooperation in assisting the project staff in identifying projects that have been funded over the past ten years. Without their assistance, we would not have been able to complete our project assignment.

A special appreciation is due the directors of the area vocational technical schools, their curriculum coordinators and staff, for their assistance in providing us with information on the outcome of their funded project.

Appreciation is also given to our resource consultants, who aided us in identifying those projects which had potential for follow-up, and provided us with criteria for assessing the value of the funded projects.

ABSTRACT

19-6812: Evaluation of Funded Projects
for
Development of Vocational Instructional Materials

John J. Vincent
The Pennsylvania State University
Division of Occupational &
Vocational Studies
105 Rackley Building
University Park, PA 16802
(814) 865-8361

$29,991.00 Federal
10,963.00 Local

7/1/76 to 6/30/77

The purpose of the project was to examine curriculum materials developed through funded projects to determine principles and methods used and to examine strengths and weaknesses of each. A comprehensive inventory of curriculum materials in existence throughout the state will be developed.

Objectives:

1. To identify the funded course of study projects presently in existence throughout the state.
2. To examine funded curriculum projects to determine the likes and differences within the various delivery systems.
3. To examine the initial strengths and weaknesses intended in the various approaches and methods.
4. To develop a strategy for evaluating the strengths and weaknesses for future study.
5. To develop and publish a quarterly newsletter to be disseminated to vocational programs throughout the state.

Outcomes:

The objectives of this project were accomplished through the use of a survey instrument disseminated to all schools with vocational programs, a telephone survey and on-site visitations to selected project sites as well as the involvement of consultants to develop strategies. These activities resulted in:

1. A comprehensive listing of curriculum projects in the state from 1970-71 to 1977.
2. A breakdown of the amount of funding allocated for curriculum development.
3. The selection of various curriculum projects to be evaluated.
4. An evaluation of the degree of successfulness of selected projects.
5. Suggested guidelines for the development of instructional material and funding patterns.

Audience:

The results of this first year's activities of the project are useful to all individuals involved with vocational education throughout the state.

Publications and Available Material:

- Final Report
- Inventory Listing of All Curriculum Materials from 1970-71 to 1977
- Newsletters Disseminated to All Vocational Programs in the State
- Copies of All Survey and Evaluation Instruments

BACKGROUND OF THE PROBLEM

Since the passing of the Vocational Education Act of 1963 and the amendments of 1968 and 1970, considerable amounts of money have been allocated by state and federal government to increase and improve the vocational education system. The monies that have been and still are being provided to vocational education are utilized for various activities such as building schools, buying equipment, developing guidance programs, establishing career education programs and many other activities serving to provide vocational training. One of the major activities for which funding is provided, that is essential to the success of vocational education programs, is that of curriculum: the development of instructional materials necessary to provide knowledge to perform a particular task. Curriculum development projects designed to accomplish specific objectives and meet assigned goals are being developed by various activities for use in vocational programs. As this is undoubtedly a vital factor in providing students with marketable skills, it is also vital to continuously upgrade and improve the content of instructional materials. A viable method of accomplishing this important step in curriculum development is to build on ideas and processes previously implemented by other schools. Although this would seem to be the most logical approach to use, studies have not been developed to look at present and past curriculum development projects to answer questions like: "How good are these materials?"; "Do these materials do the job intended?"; and, "What materials and system will benefit the greater number of students in the shorter time period?". Would it not be a worthwhile process to review the "What, Why, and How" of other curriculum projects prior to beginning to develop one. After all, why discover America all over again. Granted that curriculum development projects are and should be designed to meet local needs; however, there are common characteristics that should be incorporated or avoided when developing instructional materials. It is the purpose of this report to describe a method by which the above situation can be resolved and guidelines be established to benefit future development in curriculum projects.

PROCEDURES

Upon developing a strategy to accomplish the primary objective of this project (that of evaluating instructional materials), it was first necessary to develop a method by which to identify the vast number of curriculum projects in the state for the past ten year period. This activity resulted in countless hours of contacts, visitations, phone calls and investigation of many sources that could possibly provide the information required to begin the study.

As the first piece of information required was to identify the location, nature and amount of funding of curriculum projects, the initial phase of this project was to meet with any individuals who might have some knowledge of the location of the larger curriculum projects. Larger curriculum projects are those which possess one or possibly two characteristics; First, large in terms of the number of occuaptional areas the project was to serve (i.e., curriculum projects which structured or developed materials for the total occupational offerings of a vocational-technical school) and secondly, large in terms of dollars or cost to implement (i.e., project which was allocated a dollar amount which would seem to indicate a major activity was planned).

The process of identifying curriculum projects that have taken place in vocational education was accomplished through communications and visits with the Pennsylvania Department of Education in Harrisburg, The VEIN System at Millersville State College as well as a survey instrument disseminated to all area vocational-technical schools, community colleges, intermediate units, and comprehensive high schools with vocational programs. (A copy of the survey instrument and accompanying letter is presented on pages 20, 21, and 22 of Appendix A. The survey instrument was sent to 132 educational institutions of which forty-five (34%) responded that they have had funded curriculum projects; forty-eight (36%) incidated that they had not had projects; and, thirty-nine (30%)

did not respond to the survey instrument. A listing of the project locations, project titles, and their specific response to the survey may be found on Pages 24 thru 30 of Appendix B.

Mail Survey Results:

Type of Institution	Number Sent	Have Had Curriculum Projects: Yes	No	No Response
AVTS	66	21	34	11
Comprehensive High School	20	7	5	8
Community College	17	9	2	6
Intermediate Units	29	8	7	14
Totals:	132 (100%)	45 (34%)	48 (36%)	39 (30%)

A very interesting observation concerning the survey was that: Of the forty-eight institutions which responded as not having projects, information was gathered from other sources (i.e., records in the Harrisburg Office) which, in fact, did verify that some of these schools did have curriculum projects. Although it is understandable that due to staff turnover or individuals who were not aware of others completing the survey, there were schools which had projects but did not indicate so which does indicate a problem area in the reliability of surveys and some of those who complete them.

During the period that the survey was being completed, information was obtained from the VEIN System at Millersville State College. This activity resulted in the identity of sixty-three (63) projects that have taken place and was readily recognized as not encompassing the totality of the information needed. It was necessary to visit the Department of Vocational Education located in Harrisburg where information was obtained from the Vocational Education Program Specialist, Senior Program Specialist, Head of Documents and the Director of the Research Coordinating Unit. Through the efforts of these individuals a comprehensive listing of curriculum projects was able to be developed. However, the majority of material that was obtained could only

be traced to the 1970-71 school year with a few major projects identified back to 1966. A breakdown of the total number of projects, funding sources, and local and federal monies allocated is found on pages 6, 7, and 8. (The information provided is a result of information obtained from accounting sheets provided by the Office of the Head of Documents).

In summary of the breakdown, it can be seen that $9,681,772.00 was allocated for curriculum development for the ten year period of 1965-66 to 1975-76. However, it must be emphasized that this figure does not represent the total which would appear, had information on all sources been available prior to 1970-71 and information available on Part "C" and Part "D" project sources.

As stated in the beginning of this report, the first phase of this project was to identify curriculum development projects for the past ten years funded by state or federal monies. This objective has been reached to the greatest extent possible based on the information available.

Also during this period a newsletter was disseminated to all individuals involved with vocational education in the state. A copy of this newsletter appears in the Appendix C on Pages 32, 33 and 34.

Identification of Project Funding Breakdowns:

YEAR	SOURCE	NUMBER OF PROJECTS	AMOUNT OF FUNDING LOCAL	FEDERAL	TOTAL
1975-76	Part "B" - Postsecondary	27	$70,302	$244,784	$ 315,086
	Part "B" - Disadvantaged	5	5,346	2,299	7,645
	Part "B" - Handicapped	7	550	38,765	39,315
	Part "B" - Ancillary	14	17,093	111,152	128,245
	Part "A" - Disadvantaged	3	--	3,580	3,580
	Part "G" - Co-op	2	125	1,450	1,575
	Part "F" - Consumer/Homemaking (regular)	51	10,177	135,204	145,381
1974-75 (carry-overs)	Part "B" - Postsecondary	10	8,450	23,024	31,474
	Part "B" - Disadvantaged	4	300	7,352	7,652
	Part "B" - Handicapped	1	--	10,130	10,130
	Part "F" - Consumer/Homemaking (regular)	7	1,505	10,177	19,682
	Part "F" - Consumer/Homemaking (depressed)	49	6,593	33,898	40,491
1974-75	Part "B" - Secondary	6	62,120	89,000	151,120
	Part "B" - Postsecondary	16	20,987	76,430	97,417
	Part "B" - Adult	2	4,158	21,360	25,518
	Part "B" - Disadvantaged	12	13,628	26,438	40,066
	Part "B" - Ancillary	6	6,390	96,657	103,047
	Part "A" - Disadvantaged	5	7,105	1,200	8,305
	Part "F" - Consumer/Homemaking (regular)	2	1,136	10,529	11,665
	Part "F" - Consumer/Homemaking (depressed)	20	(Not Available)		--
	Part "G" - Co-op	2	600	4,648	5,248
	Part "B" - Teacher Education	8	152,952	134,411	287,363
1973-74 (carry-overs)	Part "B" - Secondary	1	500	--	500
	Part "B" - Postsecondary	2	558	40,728	41,286
	Part "B" - Ancillary	1	--	6,400	6,400
	Part "A" - Disadvantaged	1	--	3,271	3,271
	Part "B" - Handicapped	1	4,000	--	4,000
	Part "F" - Consumer/Homemaking (regular)	4	440	16,134	16,574
	Part "F" - Consumer/Homemaking (depressed)	22	14,714	78,843	93,557
1973-74	Part "B" - Regular	6	45	38,892	38,937
	Part "B" - Postsecondary	13	15,200	68,460	83,660
	Part "B" - Disadvantaged	31	89,466	524,189	613,655
	Part "B" - Handicapped	29	33,611	471,672	505,283
	Part "B" - Ancillary	14	29,153	118,573	147.726
	Part "A" - Disadvantaged	17	37,737	129,539	167,276
	Part "F" - Consumer/Homemaking (regular)	16	895	170,618	171,513
	Part "F" - Consumer/Homemaking (depressed)	30	1,454	36,535	37,989

YEAR	SOURCE	NUMBER OF PROJECTS	AMOUNT OF FUNDING LOCAL	FEDERAL	TOTAL
1972-73 (carry-overs)	Part "B" - Secondary	1	$ --	$ 23,439	$ 23,439
	Part "B" - Secondary (impounded)	4	500	2,700	3,200
	Part "B" - Postsecondary (impounded)	7	9,100	80,004	89,104
	Part "B" - Disadvantaged	0	--	--	--
	Part "B" - Handicapped	1	--	8,385	8,385
	Part "B" - Ancillary	9	6,400	85,500	91,900
	Part "F" - Consumer/Homemaking (regular)	1	--	42,105	42,105
	Part "F" - Consumer/Homemaking (depressed)	6	275	15,928	16,203
	Part "F" - Consumer/Homemaking (regular) (impounded)	7	900	11,009	11,909
	Part "F" - Consumer/Homemaking (depressed) (impounded)	19	611	34,886	35,497
	Part "A" - Disadvantaged (impounded)	8	--	15,800	15,800
1972-73	Part "B" - Regular	10	4,510	22,673	27,183
	Part "B" - Disadvantaged	14	15,854	10,780	26,634
	Part "B" - Handicapped	9	30,660	33,084	63,744
	Part "B" - Adult	1	400	--	400
	Part "B" - Ancillary	9	90,355	192,915	283,270
	Part "A" - Disadvantaged	6	2,020	15,408	17,428
	Part "F" - Consumer/Homemaking (regular)	29	2,166	47,987	50,153
	Part "F" - Consumer/Homemaking (depressed)	47	12,619	63,876	76,495
	Part "G" - Co-op	3	1,625	--	1,625
1971-72 (carry-overs)	Part "B" - Regular	4	29,093	3,100	32,193
	Part "B" - Disadvantaged	6	514	19,515	20,029
	Part "B" - Handicapped	9	3,316	24,166	27,482
	Part "B" - Ancillary	17	55,035	98,118	153,153
	Part "F" - Consumer/Homemaking (depressed)	1	--	589	589
	Part "G" - Co-op	2	390	4,140	4,530
1971-72	Part "B" - Regular	44	13,584	163,772	177,356
	Part "B" - Disadvantaged	30	22,441	69,776	92,217
	Part "B" - Handicapped	11	28,210	24,247	52,457
	Part "B" - Adult	1	500	--	500
	Part "A" - Disadvantaged	10	4,637	22,284	26,921
	Part "B" - Postsecondary	4	3,907	14,730	18,637
	Part "B" - Ancillary	11	234,998	184,622	419,620
	Part "D" - Exemplary	2	3,067	7,450	10,517
	Part "F" - Cons./Hmk.(depressed)	76	16,468	183,988	200,456
	Part "F" - Cons./Hmk.(regular)	38	12,837	88,712	101,549
	Part "G" - Co-op	19	6,156	10,681	16,837

YEAR	SOURCE	NUMBER OF PROJECTS	AMOUNT OF FUNDING LOCAL	FEDERAL	TOTAL
1970-71 (carry-overs)	Part "B" - Regular	15	$ 420	$ 41,063	$ 41,483
	Part "B" - Secondary	3	977	6,477	7,454
	Part "B" - Ancillary	5	12,010	66,904	78,914
	Part "A" - Disadvantaged	1	7,200	5,350	12,550
	Part "G" - Co-op	9	2,829	26,478	29,307
	Part "F" - Consumer/Homemaking (regular)	21	13,105	40,850	53,955
	Part "F" - Consumer/Homemaking (depressed)	34	21,248	61,050	82,298
1970-71	Part "B" - Regular	118	75,937	992,853	1,068,790
	Part "G" - Co-op	12	18,158	28,158	46,913
	Part "F" - Consumer/Homemaking (regular)	13	17,016	62,072	79,088
	Part "F" - Consumer/Homemaking (depressed)	13	5,943	26,883	32,826
	Part "A" - Disadvantaged	5	20,877	72,095	92,972
	Part "B" - Ancillary	9	43,001	56,204	99,205
	Part "B" - Community College	1	1,786	26,214	28,000
	Part "B" - Postsecondary	8	5,096	54,661	59,757
	Sub-totals:	1,185	$1,476,041	$5,988,620	$7,464,661
1972 - June 1976	Part "D" Exemplary	4	77,483		77,483
1972 - June 1975	Part "C" Research	9	252,466		252,466
	Total 1970-71 to 1975-76 all sources:				$7,794,610
July 1965 - June 1971 (includes only major projects)	Part "C" Research	8	601,422	1,285,740	1,887,162
	Grand Total:				$9,681,772

As can be seen from the above summary, a total of $7,794,610 was allocated for curriculum development form school year 1970-71 to 1975-76 from all sources. This, however, is not all inclusive due to the fact that only a portion of information totaling 329,949 was available on Part "D" and Part "C" projects. Also, it was possible to secure information on only major projects in Part "C" for the period of 1965-June 1971 totaling $1,887,162 and figures do not represent sources other than Part "C" for this time period.

Selection of Projects:

Having acquired information concerning the number of projects, the funding source, and the amount of funding received by schools for the development of instructional materials, the next phase of the project was to focus on the selection of projects to be evaluated.

This activity presented somewhat of a problem in that at this point the researcher had available to him only the project number and the amount of funding received. It was necessary to develop a method by which to select those curriculum project proposals which would seem to indicate a major activity had taken place. The process of developing a listing of projects that consultants could later review for evaluation was quite basic. The researcher simply reviewed the amount of funding received for a particular project and randomly selected any project with a large dollar amount while also selecting projects from each of the vocational disciplines. The project proposals were then able to be pulled from storage files using the project number which was originally provided. This information was then assembled with any projects that had been identified from the survey instrument and resulted in a descriptive listing of the following:

Type of Institution	Number of Projects Selected for Evaluation
AVTS	23
Comprehensive High School	27
Intermediate Unit	9
Community College	11
College or University	6
Total:	67

These projects would then be presented to consultants to determine which should be evaluated. A breakdown of the project sites appear in Appendix D on Page 36.

Consultant Involvement:

Having developed a comprehensive listing of curriculum projects, the next phase in the course of this project was to review the abstract description of these projects to determine how and which of the projects should be evaluated. This activity was accomplished through the cooperation and suggestions of consultants who presented position papers and attended a two-day meeting to develop strategy for the evaluation process. (A sample of the correspondence and meeting agenda appear (in Appendix E). The consultants' position papers are also presented (see Appendix J).

During the two-day meeting held in January, 1977 the individuals brought in as consultants were presented with a comprehensive listing of past and current curriculum project descriptions and asked to address three issues:

A. What type of projects should be examined?

B. Which specific projects should be evaluated?

C. How can curriculum projects be evaluated?

In response to issue "A" above (What type of projects should be examined?), it was determined that any projects should be considered which possessed one or more of the three following criteria:

1. The project required adaptation or creation of new software.
2. The project utilized previously non-existent hardware with learners.
3. The project necessitated a retraining of staff in preparation of curriculum development activities.

In response to issue "B" (Which projects should be evaluated?), it was determined by the committee that the evaluation process itself should involve three activities:

1. Certain projects should be evaluated by on-site visitation to determine teacher and administration perceptions of their projects.
2. Some project sites should be contacted by phone to ascertain the initiators perceptions of effectiveness.
3. All software or curriculums which developed courses of study for student use should be evaluated for effecciveness.

The committee then reviewed descriptive abstracts of the sixty-seven projects based on the criteria they had established for selection. This process resulted in the selection of forty-two projects to be evaluated by on-site visitation and twenty-one projects to be contacted by phone so as to gain insight of their effectiveness and problem areas. It was also determined that fourteen of the projects did not require any evaluation in that these projects clearly identified that funding was utilized to hire additional staff to supplement curriculum or involved in-service activities for instructors in the area of curriculum.

The chart below provides a breakdown of the number of schools to be assessed and the methods to be utilized to carry out this activity.

Number of Projects and Methods for Evaluation:

	On-Site Visitation	Telephone	No Evaluation
AVTS	14	4	6
Comprehensive High School	13	8	6
Intermediate Unit	3	4	1
Community College	8	2	1
College or University	3	3	-
Private	1	-	-
	42	21	14

As previously indicated, these projects were selected according to their relationship in meeting the established criteria determined by the committee.

Presented in Appendix F Pages 41 thru 48 is a comprehensive listing of the location and title of those projects to be assessed by on-site visitation (42 projects) and those to be assessed by a telephone questionnaire (21 projects).

Development of Evaluation Instruments:

Having determined which of the curriculum projects should be assessed and by what method, the committee then began to determine what type of evaluation tool would be necessary to carry out this function. It became apparent that the type of evaluation methods which were suggested necessitated the development of three evaluation tools:

A. An instrument was needed to compile information obtained on those projects which were to be contacted by telephone.

B. An instrument was required to record information during on-site visitations to the selected project locations.

C. An instrument was needed to evaluate any software instructional material that resulted during the course of a curriculum project.

A. Telephone Questionnaire

The development of an instrument for use during telephone contacts to assess the effectiveness of a school's curriculum project is a very trying task. The instrument, which appears (in Appendix G) on page 50, was designed to ask a small number of questions while answering two important questions: How successful was the project?; and, What problems occurred?

In the utilization of this instrument the major portion of the respondents indicated that there were no problems with the projects they had developed and answered every question on the instrument positively with the exception of Item #7 which asked if there were any problems with the project or material. The major response to this item was "NO" other than updating of material. A listing of the schools contacted by phone with the respondents comments concerning each item can be found in the Appendix G on Pages 51, 52, and 53.

As can be seen from the information presented, in the appendix, there seems to be a trend from the respondents to not answer any questions negatively or indicate any serious problems with their curriculum projects. A pitfall of a telephone interview is that the respondent is very reluctant to provide any real indepth information and the interview is not physically able to see any materials that were developed. Although these pitfalls were experienced, the respondents may have derived some recognition of the accountability factor in fulfilling their commitments to state funded projects. Some of the projects which were specified to be contacted have since been reviewed and will be evaluated through on-site visitation rather than telephone in the continuing phases of this project.

B. On-Site Visitation Instrument

As previously indicated in this report, the consultants brought in for this project in January, 1977 identified and selected forty-two projects that warranted on-site visitations. It was the intention of the visitation to secure a first-hand view of the projects' implementation and to gain an understanding of the administrators perception of the successfulness of their curriculum project.

The instrument utilized for this purpose was an interview sheet in which the observer attempted to bring forth comments and answers to twenty-one questions presented to the respondents. (A copy of this instrument appears in the Appendix H on Pages 55 and 56.

A listing of the schools selected for on-site visitation appear on Pages 57 thru 62 of the Appendix H.

C. Product Assessment Instrument

The purpose of the product assessment instrument is to effectively evaluate the success and degree of development for instructional materials used by the student in any of the vocational disciplines. The instrument which was utilized in this study is that proposed by the State Advisory Vocational Curriculum Committee for evaluation of funded curriculum projects. Through the usage of this instrument the project was able to have available a method by which to evaluate material from all disciplines while also serving the State Committee to determine any revisions necessary on the survey form to be implemented in the future. (See Appendix I Pages 64, 65, and 66).

CONCLUSIONS AND RECOMMENDATIONS

This project which was funded for the period of July 1, 1976 to Sept. 30, 1977 was not initiated until September of 1976 due to the availability of an individual for the position of Project Coordinator. This delay in implementation however was not detrimental to the accomplishment of the specified objectives for the first year's activities. As seen in the text of the report the project has resulted in:

- The development of a comprehensive listing of funded curriculum projects. (The total listing complete with project titles, locations, and description is to voluminous to be included in the text of this report but is available upon request)
- A breakdown of the amount of funding and the funding source (i.e., Part B - Part C - Part F, etc.) has also been established.
- The selection of funded curriculum projects to be evaluated.
- The development and basic implementation of a strategy to be utilized for the following phases.
- Suggested recommendations for consideration of future funding.
- The dissemination of newsletters to vocational educators to orient them to the objectives of the project and inform them of the projects' status.

With the implementation of a mail survey, a telephone instrument, and on-site visitation form as well as the product assessment instrument, it was recognized that while the mail survey and on-site visitation form were successful, it is necessary to revise the telephone instrument and develop the product assessment instrument into a workable format. The telephone instrument in the opinion of this

researcher is extremely difficult to use in that the respondents simply will not point out any flaws in their project over the phone and also the opportunity to view the materials developed is eliminated. It is recommended that for the second phase of the project that telephone curriculum locations be incorporated with the on-site visitations.

The use of the product assessment instrument was successful to the degree utilized. This form however, is in need of some revision so as to be applicable to all vocational disciplines as well as adding or deleting items to enhance the reliability of the instrument. These revisions are currently under way and the finished product will be used upon completion.

The on-site visitations which took place have been extremely beneficial in the development of a total concept of the successfulness of funded curriculum projects in general. During the on-site visitations the observer recognized three types of curriculum projects 1) Those that enhanced the educational process and were very well structured, 2) Those projects that exist in name only and utilized funding only as a duplication of efforts and 3) Those projects which fall somewhere between the first 2 groups.

The mail survey and the research in Harrisburg resulted in a multitudinous listing of curriculum projects across the state. It is recommended that this listing should be provided to vocational educators to stimulate innovative ideas and to help educators in securing information on materials already developed to eliminate duplication of effort among schools.

During the twelve months of activities of the project there are some general conclusions which may be drawn. Listed below are the observed difficulties which seem to exist in the current structure of curriculum development projects.

1. Schools in general are not aware as to where they can secure instructional materials that already exist. Rather than starting

to develop materials with limited resources available, it would be most beneficial to secure information on existing material thus helping to reduce duplication of effort and cost. This perhaps can be done through a newsletter or complete listing made available to all schools.

2. In many cases the information received from administrators is that they face a constant problem with budgetary problems. After a project has been developed and initiated and state funding expires, the local district does not pick up the cost for continuation of the material. This also presents a problem in that equipment which was purchased originally to enhace the instructional process now sets idle or is used to carry out business operations rather than to facilitate the educational process.

3. In some instances it was also observed that some administrators and some teachers do not possess the background or technical knowledge of viable curriculum development skills. It is recommended that consideration be given to the development of in-service curriculum workshops to develop the "How To" skills of educators.

4. It was also recognized that a large dollar amount is spent on the development of an innovative idea for the total course areas of the total educational program. It is recommended that these projects be first introduced on a trial basis with effective evaluation prior to developing a complete package.

With the completion of on-site visitations to schools, the final development of a product assessment instrument and increasing knowledge of educators that accountability is not just a word, the development of this project will further enhance the vocational education process. It is most essential that a more structured format for the implementation of funded curriculum projects be developed to not only reduce cost, duplication of efforts and increase the educators' effectiveness, but most importantly to better prepare vocational students to enter the world of work as proud and productive citizens.

APPENDIX A

Survey Instrument

and

Letter to Administrators

THE PENNSYLVANIA STATE UNIVERSITY

IDENTIFICATION OF CURRICULUM DEVELOPMENT PROJECTS IN VOCATIONAL EDUCATION

NAME and ADDRESS OF SCHOOL _____

_____

_____ TELEPHONE NUMBER _____

NAME and TITLE of PERSON COMPLETING SURVEY _____

_____

1. Has your school participated in a curriculum development project in the past 10 years funded by State or Federal sources? YES ____ NO ____

2. If YES, Please Continue (complete one section for each project - use reverse side if necessary)

3. A. TITLE OF PROJECT _____

Person in Charge of Project _____
Title

Approx. Dates of Project's Developmental Phase From _____ To _____

Areas Served (check where applicable): Tech. & Indust. ____ Home Ec. ____

Health ____ Agriculture ____ Bus. Ed. ____ Dist. Ed.____

Funding Source _____

Project Number (if known) _____ Brief Description of Project's Intent _____

_____

_____

Are materials derived from this project still in use? YES ____ NO ____.

* * * *

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

October 5, 1976

Dear

The Pennsylvania State University has recently undertaken a project designed to upgrade the direction and form of curriculum materials in vocational education.

Although many curriculum development projects have taken place in local or regional areas, there is a need to compile the results of these projects into suggested guidelines to benefit all vocational programs in the state.

This project will be carried out through various activities that include:

1. Identifying state or federally funded vocational curriculum development projects that have taken place in the past ten years.

2. On-site visitations to project locations to determine effectiveness of project.

3. Identifying common characteristics of successful curriculum projects.

4. Dissemination of newsletters to provide an update of projects and new ideas in curriculum development.

5. Establishing suggested guidelines to enhance the development of vocational curriculum.

At the present time we are in the process of identifying projects that have taken place in the past ten years through federal and/or state funding sources. With this in mind, we would like to have you complete the enclosed survey form, at your earliest convenience, and return in the enclosed envelope to:

John J. Vincent, Project Coordinator
The Pennsylvania State University
105 Rackley Building
University Park, PA 16802

Thank you for your time and assistance. Your response will provide us with valuable information and also enable us to compile a mailing list for newsletters and reports. Your comments and suggestions are gratefully welcomed.

Cordially,

Frederick G. Welch
Project Director

John J. Vincent
Project Coordinator

FGW:JJV/lh

Enclosures

APPENDIX B

Mail Survey Responses

SURVEY INSTRUMENT

YES Replies

School	Title Of Project (s)
A. W. Beattie AVTS	"Team Teaching Approach to Health Occupational Programs"
Admiral Peary AVTS	"Temporary Individualized Modular Education Scheduling"
	"Development of Competency-Based Curriculum for the Mining Energy Related Industries"
	"Finalizing Course Material for disadvantaged Students"
Central Westmoreland AVTS	"Making Vocational Instructional Video Tapes"
Delaware AVTS	"Dental Technology"
	"Development of Individual Instructional Packages - Materials Handling"
	"Development of Individual Instructional Packages - Machine Tool"
	"Remedial Math for Vocational Students"
	"In-Service Directed Practice in Revising Instructional Material to Emphasize Individual Needs"
	"Behavioral Objective Workshop"
	"Creating and Using Instructional Aids"
	"Development of Learning Packages for Disadvantaged Youth in 22 Occupational Areas"
	"Career Development - Focus on Curriculum"
School District of the City of Erie	"Curriculum Development for Vocational Education"
	"Updating Home Economics in Senior High and Middle Schools"

Survey Instrument - YES Replies

School	Title of Project (s)
Greater Johnstown AVTS	"Curriculum Development"
	"Program Budget Planning"
Hazleton AVTS	"Basic Skills"
Huntingdon County AVTS	"Huntingdon County Vocational Cooperative Education"
Juniata-Mifflin County AVTS	"Survey of Business and Industry"
Lancaster County AVTS	"Development of an Experimental Curriculum for Lancaster County"
Lebanon County AVTS	"Workshop to Develop Related Training Program for Diversified Occupation Students"
Lehigh County AVTS	"A Special Education/Vocational Education Resource Room and Consulting Special Education Teacher Program for Learning Disabled Students --A Mainstream Approach"
	"Cluster Curriculum Development"
Middle Bucks County AVTS	"Summer Curriculum Workshop"
Monroe County AVTS	"Staff Development Program"
Northern Chester County Tech. Sch.	"Curriculum Writing"
Philadelphia AVTS	"Personalized Individualized Vocational Occupations Training (PIVOT)"
Pittsburgh Board of Education	"Health Occupations Advanced Standing and Articulation Pattern"
	"Phase II - Discovery in Consumer Management and Related Careers"

Survey Instrument - YES Replies

School	Title of Project (s)
Schuylkill County AVTS	"Home Health Management Assistant"
	"Schuylkill Occupational Career Educa. Program"
Somerset County AVTS	"Curriculum Development"
Upper Bucks County AVTS	"In-Service Education for Staff"
	"Transitional-Occupation Education for Vocationally Training the Disadvantaged and Handicapped"
Wilkes-Barre AVTS	"Curriculum Development"
Aliquippa Senior High School	"Curriculum Revision to Emphasize Consumerism"
	"Revision of Bachelor Living Course"
Bradford Area High School	"Vocational Education Possibilities in the Petroleum Industry"
	"Vocational-Technical Course in Petroleum Production"
C. M. Schwab Vocational School	"Part "B" Secondary - Public Law 90-576"
Dover Area High School	"702 General Clerical"
Greater Johnstown School District	"Distributive Education"
George Junior Republic	"Career Resource Center for Approximately 250 Court Adjudicated Deliquent Boys"
	"Pre & Post Evaluation Program"
Penn Hills School District	"Developing a Total Curriculum Design for Teaching Service Occupations"

Survey Instrument - YES Replies

School	Title of Project (s)
Community College of Allegheny County	"Voc Project (Vocational Opportunity Center)"
	"Medical Assistant Grade I"
Community College of Beaver County	"Nursing Modular Grant"
	"Biology Computer Testing Grant"
Butler County Community College	"Expansion of Park Management Program to Include Environmental Skills"
	"Curriculum Improvement in Drafting Technology"
	"Nursing and Auxiliary Nursing Articulation Program"
	"Computer Assisted Instruction Program"
Lehigh County Community College	"Individualized Instruction, Course in Direct Current Circuits"
	"Individualized Instruction, Alternating Current Circuits"
	"Individualized Instruction, Electronics Circuits"
	"Individualized Instruction, Digital Fundamentals"
	"Individualized Instruction, Measurement Techniques"
	"Individualized Instruction, Physics for Technicians I"
	"Individualized Instruction, Physics for Technicians II"
	"Individualized Instruction, Physics for Students of Allied Health Programs"

Survey Instrument - YES Replies

School	Title of Project (s)
Luzerne County Community College	"Dental Auxiliary Feasibility Study"
	"Child Development Technology"
	"Criminal Justice Feasibility Study"
	"Nursing Feasibility Study"
Montgomery County Community College	"Medical Laboratory Technician Program"
	"Dental Hygiene Project"
Northampton County Area Community College	"Automotive Technology Program"
	"College-At-Home Program"
	"Individualizing Nursing Instruction"
Westmoreland County Community College	"Integrated Science"
Williamsport Area Community College	"Eradicating Sexism in Vocational Education"
	"Instructional Development for the Service and Operation of Heavy Equipment Program"
I.U. #1 Youth Development Center	"Pre-Employment Preparation for a Youth Development Center"
I.U. #4 Midwestern	"A Pre-Vocational Thrust - Sec. EMR Students"
I.U. #5 Northwest Tri-County	"VAULT"
	"Unifying and Individualizing Career Education"
I.U. #12 Lincoln	"Home and Community Adjustment Program"

Survey Instrument - YES Replies

School	Title of Project (s)
I.U. #16 Central Susquehanna	"Vocational Assessment Program"
	"Student's Vocational Education and Training"
	"Career Deveolpment Guide Field Testing"
	"Career Education Services"
	"The State Career Education Plan for Bringing About Community Learning"
	"CSIU - Career Education Institute"
	"Project Improve"
I.U. #24 Chester County Career Center	"Prevocational Program and Mainstreaming Handicapped"
I.U. #26 School District of Philadelphia	"Individualized Instruction in Business Distributive and Cooperative Education"
	"Clerical Skills Lab"
	"Word Processing"
	"Curriculum and Staff Development in Consumer Education"
	"Career Awareness in Home Economics"
	"Curriculum and Staff Development in Consumer Law"
	"Learning Packets in Child Care and Development"
	"Consumer and Homemaking for Students in Continuing Education"
	"Consumer and Homemaking Education for Retarded Trainables"
I.U. #29 Schuylkill	"Schuylkill County Occupational Career Educationa Program"

SURVEY INSTRUMENT

NO Replies

School

1. Altoona Area VTS
2. Bethlehem AVTS
3. Bradford County AVTS
4. Carbon County AVTS
5. Central Montgomery Cty AVTS
6. Centre County AVTS
7. Clearfield County AVTS
8. Columbia-Montour AVTS
9. Crawford County AVTS
10. Dauphin County Technical School
11. Eastern Montgomery Cty AVTS
12. Eastern Northampton Cty AVTS
13. Eastern Westmoreland AVTS
14. Erie County Technical School
15. Forbes Road East AVTS
16. Franklin County AVTS
17. Greene County AVTS
18. Harrisburg-Steelton-Highspire AVTS
19. Lackawanna County AVTS
20. Lawrence County AVTS
21. Lenape AVTS
22. Mercer County AVTS
23. Mon Valley AVTS
24. Northern Westmoreland AVTS
25. North Montco AVTS
26. Northumberland County AVTS
27. Reading-Muhlenberg AVTS
28. Steel Valley AVTS
29. SUN AVTS
30. Tioga County AVTS

School

31. Warren County AVTS
32. Western AVTS
33. Western Montgomery County AVTS
34. West Side Area VTS
35. York County AVTS
36. Carlisle Area School District
37. Clairton High School
38. Greensburg Salem School District
39. Milton Area Senior High School
40. Community College of Allegheny County College Center North
41. Williamsport Area Community College
42. Clarion Manor Intermediate Unit #6
43. Appalachia Intermediate Unit #8
44. Seneca Highlands Intermediate Unit #9
45. Central Intermediate Unit #10
46. Lancaster-Lebanon Intermediate Unit #13
47. Colonial Northampton I.U. #20
48. Intermediate Unit #28

APPENDIX C

Newsletter

The Pennsylvania State University
Division of Occupational & Vocational Studies

N E W S L E T T E R

Nov., 1976 No. 1

The following information is the first in a series of quarterly newsletters designed to orient "PA Vocational Educators" as to the nature and status of a research project currently underway at The Pennsylvania State University.

***** WHAT IS THE PROJECT?

The title is "Evaluation of Funded Projects for Development of Vocational Instructional Materials" and is under the direction of Dr. Fred Welch and John J. Vincent, Project Coordinator & Newsletter Editor at The Pennsylvania State University,

Division of Occupational & Vocational Studies
115 Rackley Building
University Park, PA 16802
(814) 865-8361

***** WHY?

The availability of federal and state monies to local districts has enabled the State of Pennsylvania to establish and operate vocational education programs that are among the best in the country incorporating modern facilities, relevant instruction and highly competent personnel to prepare our youth to enter the world of work.

A major activity for which funding is provided is that of curriculum development, requiring continuous revision and upgrading to provide students with marketable skills that match the needs of business and industry. A valuable method of developing these materials at the local level is to build on ideas and processes already implemented by others who have faced a similar task. Although this would seem to be the most logical approach to use, a system does not exist by

which a school in Eastern Pennsylvania can build upon those materials already developed by a school in Western Pennsylvania or vice versa. Would it not be a worthwhile process to review other curriculum projects prior to beginning to develop one. After all, WHY DISCOVER AMERICA ---- AGAIN? There is a need to compile the results of existing curriculum projects into suggested guidelines to benefit all vocational programs in the State.

***** HOW DO WE RESOLVE THE SITUATION?

The Penn State Project hopes to further enhance a "sharing of knowledge" between local districts through various activities designed to upgrade the direction and form of curriculum materials in vocational education. This objective will be accomplished by:

1. Identifying state or federally funded vocational curriculum development projects that have taken place in the past ten years.

2. The project staff will make on-site visitations to schools to identify those characteristics which contribute to the development of successful curriculum projects.

3. Newsletters will be disseminated to provide an update of the project and to provide you with new ideas and processes used by others.

4. The components necessary to develop relevant and viable curriculum materials will be "pulled together" in the form of suggested guidelines.

The above activities will eventually allow all vocational programs to draw from the many innovative ideas of others across the state.

***** CURRENT STATUS

Beginning in September of 1976, the project is currently in the first stage of activities. The staff has begun to identify curriculum projects that have taken place in the past ten (10) years. This activity is being accomplished through communications with the Department of Education, the VEIN System at Millersville State College, and surveys to local AVTS, Community Colleges, Intermediate Units, and Comprehensive High Schools with vocational programs. The results of these processes are currently being compiled and will be presented in the next newsletter.

To those of you who have contributed your time and efforts in the identification process, I must say that your cooperation is truly appreciated. It is the dedication and interest of people like yourselves that will enable the future citizens of Pennsylvania to enter the labor market as proud, productive and competent workers in the world of work.

For more information of this project, contact Dr. Frederick Welch or John J. Vincent; Division of Occupational & Vocational Studies, The Pennsylvania State University -- (814) 865-8361.

APPENDIX D

Listing of Project Locations

PROJECT LOCATIONS

AVTS:

1. A. W. Beattie
2. Admiral Peary
3. Altoona
4. Berks County
5. Central Westmoreland
6. Delaware
7. Greater Johnstown
8. Hazleton
9. Jefferson County DuBois
10. Lancaster County
11. Lehigh County
12. North Fayette County
13. Pittsburgh Bd. of Educa.
14. Wilkes-Barre

COMPREHENSIVE HIGH SCHOOLS:

1. Bradford Area High Sch.
2. Central Columbia Sch. Dist.
3. Chester-Upland Sch. Dist.
4. Coatesville Area Sch. Dist.
5. Crawford Central Sch. Dist.
6. Erie, Sch. Dist. of City of
7. Harrisburg City Sch. Dist.
8. Hazleton Area Sch. Dist.
9. Kiski Area Sch. Dist.
10. Neshaminy Sch. Dist.
11. Penn Hills Sch. Dist.
12. Waynesboro Area Sch. Dist.

INTERMEDIATE UNITS:

1. I.U. #5 Northwest Tri-County
2. I.U. #12 Lincoln
3. I.U. #16 Central Susquehanna
4. I.U. #26 Philadelphia

COMMUNITY COLLEGES:

1. C. C. of Allegheny County
2. C. C. of Beaver County
3. Butler County C. C.
4. Harrisburg Area C. C.
5. Lehigh County C. C.
6. Northampton County C. C.
7. C. C. of Philadelphia
8. Williamsport Area C. C.

COLLEGES/UNIVERSITIES:

1. The Pennsylvania State University
2. University of Pittsburgh
3. Robert Morris College

PRIVATE SCHOOL:

1. Educational Projects, Inc.
   Pittsburgh, PA

APPENDIX E

Consultants Correspondence

and

Meeting Agenda

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
Division of Occupational and Vocational Studies
RACKLEY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

January 14, 1977

In reference to the Evaluation of Funded Projects for Development of Vocational Instructional Materials Project at Penn State University, I would like to confirm our meeting dates scheduled for January 24 and 25, 1977. We will meet at approximately 10:30 a.m. on Monday, January 24 in Room 102 of the Rackley Building and conclude at approximately 1:30 p.m. on Tuesday.

This meeting has been established in order that we might develop a method by which to evaluate vocational instructional materials in Pennsylvania. Areas of concern to me at this point in time include:

A. What types of projects should be examined.

B. Establishing a method of evaluation.

   1. Develop evaluation instrument.
   2. Visitation plan or schedule.
   3. How should the evaluation be carried out (on-site visitation, phone, mail, etc.)

C. Selection of specific projects to be evaluated.

I am looking forward to working with you on this project and feel that we may enable vocational education to take a step in the right direction.

See you Monday, January 24th.

Very truly yours,

John J. Vincent

John J. Vincent
Project Coordinator

JJV/lah

Evaluation of Funded Projects

for

Development of Vocational Instructional Material

AGENDA

January 24-25, 1977

I. Introduction of Participants

James Albert - Jefferson City DuBois AVTS
Victor Dupuis - The Penn State University - Professor, College of Education
George Elison - Lehigh County Community College - Dean of Instruction
Steve Franchak - Department of Education, Research Coordinating Unit
Donald Harris - Williamson Free School - Director
Jerome Kapes - Lehigh University - Associate Professor
Andrew Ruzanic - Mercer County AVTS - Supervisor
John Vincent - The Penn State University - Project Coordinator
Fred Welch - The Penn State University - Project Director/Associate Professor

II. Review of Objectives of the Project

III. Background and Current Status of the Project

IV. Review of Project Lists

V. Establishing a Method of Evaluating Vocational Curriculum

A. Evaluation Instrument
B. How to Implement the Instrument

VI. Selection of Specific Projects to be Evaluated

VII. Future Directions

APPENDIX F

Listing of Projects

Assessed by On-Site Visitation

and by

Telephone Questionnaire

TO BE ASSESSED BY ON-SITE VISITATION

AVTS SCHOOLS:	Title of Project (s)
1. A. W. Beattie	"Health Occupational Team Teaching and Module Development"
2. Admiral Peary	"Temporary Individualized Modular Education Scheduling"
	"Development of Competency-Based Curriculum for the Mining and Energy Related Industries"
3. Altoona	"Computer Assisted Instruction Mathematics Project"
4. Berks County	"Individualized Instructional Packages"
	"Agriculture Curriculum Development"
5. Central Westmoreland	"Making Vocational Instructional Video Tapes"
6. Delaware County	"Learning Packages for Disadvantaged Youth in 22 Occupational Areas"
	"In-Service Directed Practice in Revising Instructional Material to Emphasize Individual Needs"
	"Development of Individual Instructional Packages - Materials Handling - Machine Tool - Dental Technology"
	"Remedial Math for Vocational Students"
	"Behavioral Objective Workshop"
	"Creating and Using Instructional Aids"
	"Career Development - Focus on Curriculum"
7. Greater Johnstown	"Curriculum Development"
	"Program Budget Planning"

To Be Assessed By On-Site Visitation: AVTS Schools Continued

	Title of Project (s)
7. Greater Johnstown	"Curriculum Development" "Program Budget Planning"
8. Hazleton	"Basic Skill Curriculum"
9. Jefferson County DuBois	"Vocational Curriculum Development"
10. Lancaster County	"Development of an Experimental Curriculum for Lancaster Cty. Adult Voc. Ed." "Agricultural Mechanics Curriculum" "Floor Covering Mechanic Course of Study"
11. Lehigh County	"Cluster Curriculum Development" "Revising and Individualizing Vo-Tech Curriculums"
12. North Fayette County	"Mining and Mine Maintenance"
13. Pittsburgh Bd. of Ed.	"Health Occupations Advanced Standing and Articulation"
14. Wilkes-Barre	"Comprehensive Curriculum Development Program"

COMPREHENSIVE HIGH SCHOOLS:

1. Bradford Area High School	"Vocational Education Possibilities in the Petroleum Industry" "Voc-Tech Course in Petroleum Production"
2. Central Columbia Sch. Dist.	"Development of Modular Courses in Vocational Curriculum"
3. Chester Upland Sch. Dist.	"Law Enforcement Course of Study"

To Be Assessed By On-Site Visitation: Comprehensive High Schools Continued:

	Title of Project (s)
4. Coatesville Area Sch. Dist.	"Extension of the Development of Unified Curriculum"
	"Units in an Individualized Learning Format Which are Centered About Consumer and Homemaking Saleable Skill Activities"
5. Crawford Central Sch. Dist.	"Model Career - Oriented Curriculum by Individualizing Through Technology"
6. Erie, Sch. Dist., City of	"Updating and Implementing a Comprehensive and Consumer Homemaking Program"
	"Developing a Home Economics Program for Five Middle Schools"
	"Vocational Education Curriculum Development"
	"Development of Comprehensive Plan for Vocational Education for Handicapped"
	"Updating Home Economics in Senior High and Middle Schools"
	"Updating Home Economics Part II"
7. Harrisburg City Sch. Dist.	"Re-Direction of Homemaking Program for Inner City Students"
8. Hazleton Area Sch. Dist.	"Individual Learning Packets for Disadvantaged"
9. Kiski Area Sch. Dist.	"Vocational Curriculum Directive Development Team for Mentally Handicapped"
10. Neshaminy Sch. Dist.	"Exemplary English/Language Arts Curriculum"
11. Penn Hills Sch. Dist.	"Developing a Total Curriculum Design for Teaching Service Occupations"
12. Waynesboro Area Sch. Dist.	"Agricultural Supplies Curriculum"

To Be Assessed By On-Site Visitation:

INTERMEDIATE UNITS:	Title of Project (s)
1. I.U. #5 Northwest Tri-County	"VAULT"
	"Unifying and Individualizing Career Education"
	"Model Career Oriented Curriculum by Individualizing Through Technology"
	"Continuation and Diffusion of a Model Occupational-Oriented Curriculum"
2. I.U. #12 Lincoln	"Home and Community Adjustment Program"
3. I.U. #16 Central Susquehanna	"Vocational Assessment Program"
	"Student's Vocational Education and Training"
	"Career Development Guide Field Testing"
	"Career Education Services"
	"The State Career Education Plan for Bringing About Community Learning"
	"CSIU - Career Education Institute"
	"Project Improve"
4. I.U. #26 Philadelphia	"Consortium on Career Education to Develop Exploratory Programs"
	"Instructional Material for Skill Centers"
	"Computer Managed Instruction"
	"Implementation of the Cluster Concept in Two Vocational Areas"
	"Pre-Vocational Exploration"
	"Development of Individualized Instruction Program"
	"(PIVOT) Personalized Individualized Vocational Occupations Training"

To Be Assessed By On-Site Visitation:

COMMUNITY COLLEGES:	Title of Project (s)
1. C. C. of Allegheny County	"Development of Career Ladder in Nursing"
2. C. C. of Beaver County	"Nursing Modular Grant"
3. Butler County C. C.	"Curriculum Improvement in Drafting"
4. Harrisburg Area C. C.	"Updating Course and Curriculum Materials for Secretarial Science Career Programs Utilizing Individual Progress Instruction"
5. Lehigh County C. C.	"Individualized Instruction, Courses in Direct Current Circuits - Alternating Current Circuits - Electronics Circuits - Digital Fundamentals - Measurement Techniques - Physics for Technicians I & II - Physics for Students of Allied Health Programs"
6. Northampton County	"Automotive Technology Program"
7. C. C. of Philadelphia	"Development of Curriculum for Older Adult Workers" "Development of Curriculum in Government Service"
8. Williamsport Area C. C.	"Instructional Development for the Service and Operation of Heavy Equipment Program"

COLLEGES and UNIVERSITIES:	
1. The Pennsylvania State Univ.	"Curriculum Material Development in Agriculture" "Course of Study Project" "Competency Based Home Economics Guide" "Health Occupations Curriculum"
2. Univ. of Pittsburgh	"Dental Assistant Modules"
3. Robert Morris College	"Competency-Based Instruction in Secondary School Typing"

To Be Assessed By On-Site Visitations:

PRIVATE:	Title of Project (s)
1. Educational Projects Inc.	"Voc/Tech Education and Training Accommodating Critically Needed Skilled Manpower for the Commonwealth"
	"Allied Health Professions Project"
	"Development of Competency-Based Training"
	"Emergency Medical Training"

TO BE ASSESSED BY A TELEPHONE QUESIONNAIRE

AVTS SCHOOLS:	Title of Project (s)
1. Eastern Northampton County	"Vocational Education for Secondary Special Education Students"
2. Middle Bucks County	"Summer Curriculum Workshop"
3. Northern Chester County	"Curriculum Writing"
4. Somerset County	"Curriculum Development"

COMPREHENSIVE HIGH SCHOOLS:	
1. Aliquippa Senior High School	"Curriculum Revision to Emphasize Consumerism"
	"Revision of Single Living Course"
2. Armstrong School District	"Curriculum Development"
3. Bristol Township School Dist.	"Specialized Vocational Training Program Development"
4. Cumberland Valley School Dist.	"Typewriting Curriculum Bulletin - Revision (Bulletin 275)"
5. Dover Area High School	"702 General Clerical"

To Be Assessed By A Telephone Questionnaire: Comprehensive High Schools Continued:

	Title of Project (s)
6. North Hill School District	"Learning Modes for Vocationally Oriented Ninth and Tenth Grade Students"
7. Pennrdige School District	"Business Law Curriculum Bulletin"
8. Pocono Mountain School District	"Individual Typewriting Course"

INTERMEDIATE UNITS:

1. I.U. #4 Midwestern	"Curriculum Development - A Pre-Vocational Thrust - Sec. EMR Students"
2. I.U. #22 Bucks County	"Occupational-Transitional Education"
3. I.U. #24 Chester County Career Center	"Pre-Vocational Program and Mainstreaming Handicapped"
4. I.U. #29 Schuylkill	"Schuylkill County Occupation Career Education Program"

COMMUNITY COLLEGES:

1. Luzerne County Community College	"Criminal Justice Feasibility Study" "Nursing Feasibility Study" "Dental Auxiliary Feasibility Study" "Child Development Technology"
2. Montgomery County C. C.	"Medical Laboratory Technician Program" "Dental Hygiene Project"

To Be Assessed By A Telephone Questionnaire:

COLLEGES and UNIVERSITIES:	Title of Project (s)
1. Indiana University of Pennsylvania	"Petroleum Products and Food Products Marketing Evaluation Instrument"
	"Real Estate and Advertising Curriculum"
2. Millersville State College	"Vocational Education Curriculum Center for Pennsylvania"
	"Vocational Education Curriculum Center for Pennsylvania (VECC)"
3. Temple University	"Development of Health Occupations Modules"
	"Develop Competency-Based Activities/ Instruments in Mass Merchandising Finance and Credit"
	"Warehousing Task Analysis and Market Survey"
	"Apparel Marketing Evaluation Instrument"
	"Development of Curriculum in Warehousing and Lap Component"
	"Develop a Course of Study in Senior Bookkeeping and Accounting"

APPENDIX G

Telephone Survey Instrument

and

Results

VOCATIONAL CURRICULUM PROJECT

Telephone Questionnaire

School _____ Phone _____

Address _____

_____

Contact Person _____ Title _____

TITLE OF PROJECT _____

PROJECT NO. _____ Dates _____ to _____

Funding Source _____ Funding Amount: Federal _____ State _____ Local _____

Voc. Area Served:

(All ____) (T&I ____) (Home Ec. ____) (Health ____) (Ag. ____) (D.E. ____) (Bus.Ed. ____

Objective of Project _____

_____

_____

	Yes	No	Don't Know
1. Did the project reach its objectives?	___	___	___
Example:			
2. Are the materials developed currently in use?	___	___	___
Example:			
3. Are the materials developed usable in other school systems?	___	___	___
Example:			
4. Do teachers like the materials?	___	___	___
Example:			
5. Do students like the materials?	___	___	___
Example:			
6. Have the materials made an actual difference in student learning?	___	___	___
Example:			
7. Are there any particular problems with the project or the material of which you are aware?	___	___	___
Example:			

8. Other comments:

Use Reverse Side if Needed

RESPONSE TO TELEPHONE INSTRUMENT

School	Title of Project	Item	Yes	No	Don't Know
Eastern Northanpton AVTS	"Voc. Ed. for Secondary Special Education Students"	#1	X		
		#2	X		
		#3			X
		#4	X		
		#5	X		
		#6	X		
		#7		X	
			COMMENTS		
Somerset AVTS	"Curriculum Development"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7	X		
		#8	COMMENTS		
Middle Bucks County AVTS	"Summer Curriculum Workshop"	#1	X		
		#2	X		
		#3			X
		#4	X		
		#5	X		
		#6	X		
		#7	X		
		#8	COMMENTS		
Northern Chester County Tech. Sch.	"Curriculum Writing"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	COMMENTS		

School	Title of Project	Item	Yes	No	Don't Know
North Hill Sch. District	"Learning Modes for Vocationally Oriented 9th and 10th Grade Students"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	COMMENTS		
Aliquippa Senior High School	"Curriculum Revision to Emphasize Consumerism"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	NO COMMENTS		
Aliquippa Senior High School	"Revision of Single Living Course"	#1		X	
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6			
		#7		X	
		#8	NO COMMENTS		
Cumberland Valley Sch. District	"Typewriting Curriculum Bulletin - Revision (Bulletin 275)"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5			X
		#6			X
		#7		X	
		#8	COMMENTS		
Bristol Township Sch. District	"Specialized Vocational Training Prg. Development"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	COMMENTS		

School	Title of Project	Item	Yes	No	Don't Know
Dover Area High School	"702 General Clerical"	#1	X		
		#2	X		
		#3			
		#4	X		
		#5	X		
		#6	X		
		#7	X		
		#8	NO COMMENTS		
Armstrong School District	"Curriculum Development"	#1		X	
		#2		X	
		#3		X	
		#4		X	
		#5			
		#6			
		#7			
		#8	COMMENTS		
I.U. #4 Midwestern	"Curriculum Development A Pre-Vocational Thrust - Sec. EMR Students"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	COMMENTS		
I.U. #22 Bucks County	"Occupational-Transitional Education"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	COMMENTS		
I.U. #24 Chester County	"Pre-Vocational Program and Mainstreaming Handicapped"	#1	X		
		#2	X		
		#3	X		
		#4	X		
		#5	X		
		#6	X		
		#7		X	
		#8	COMMENTS		
I.U. #29 Schuylkill	"Schuylkill County Occupation Career Education Program"	#1			X
		#2	X		
		#3	X		
		#4	X		
		#5			X
		#6			X
		#7			X
		#8	COMMENTS		

APPENDIX H

On-Site Visitation Instrument

and

Listing of On-Site Visits

VOCATIONAL CURRICULUM PROJECT

Opinionaire
(completed for on-site visits)

School _____ Phone _____

Address _____

_____

Contact Person _____ Title _____

TITLE OF PROJECT: _____

PROJECT NO: _____ Dates: _____ to _____

Funding Source: _____ Funding Amount: Federal _____ State _____ Local _____

Vocational Area Served:

(ALL __) T&I ___) Home Ec. ___) Health ___) Ag.___) D.E. ___) Bus. Ed.___)

Objective of Project: _____

_____

_____

_____

1. What factors necessitated the development of new materials?

2. How does this material differ from previous material in existence?

3. Do you feel the materials developed have reached their intended objectives?

4. Do you feel the materials developed are useable at only the local level or could they be adopted in other schools?

5. Did the students find materials easy to use?

6. Did the instructors find the materials easy to use?

Opinionaire Continued
Page 2.

7. Was the material developed for a new program or one that was already in existence?

8. To what degree are the developed materials in use?

9. Did the materials developed necessitate a retraining of staff?

10. What grade level of student is utilizing this material?

11. What individuals were involved in the developmental phase of the materials?

12. In what format are the materials presented: printed, audio, visual or audio-visual?

13. Did the materials necessitate the purchase of new equipment?

14. Are there printed copies of the materials developed available?

15. What evaluation method was utilized to determine the effectiveness of the material?

16. From what funding source was the project initiated?

17. Could you approximate the amount of local, state and federal funds?

18. Do you feel the funding was sufficient to accommodate the developmental and implementation of the material?

19. Were other projects with similar characteristics reviewed prior to the development?

20. What type of evaluation has been completed to determine effectiveness?

21. Has the project been continued after the state funding has expired?

TO BE ASSESSED BY ON-SITE VISITATION

AVTS SCHOOLS:	Title of Project (s)
1. A. W. Beattie	"Health Occupational Team Teaching and Module Development"
2. Admiral Peary	"Temporary Individualized Modular Education Scheduling" "Development of Competency-Based Curriculum for the Mining and Energy Related Industries"
3. Altoona	"Computer Assisted Instruction Mathematics Project"
4. Berks County	"Individualized Instructional Packages" "Agriculture Curriculum Development"
5. Central Westmoreland	"Making Vocational Instructional Video Tapes"
6. Delaware County	"Learning Packages for Disadvantaged Youth in 22 Occupational Areas" "In-Service Directed Practice in Revising Instructional Material to Emphasize Individual Needs" "Development of Individual Instructional Packages - Materials Handling - Machine Tool - Dental Technology" "Remedial Math for Vocational Students" "Behavioral Objective Workshop" "Creating and Using Instructional Aids" "Career Development - Focus on Curriculum"
7. Greater Johnstown	"Curriculum Development" "Program Budget Planning"

To Be Assessed By On-Site Visitation: AVTS Schools Continued

	Title of Project (s)
7. Greater Johnstown	"Curriculum Development" "Program Budget Planning"
8. Hazleton	"Basic Skill Curriculum"
9. Jefferson County DuBois	"Vocational Curriculum Development"
10. Lancaster County	"Development of an Experimental Curriculum for Lancaster Cty. Adult Voc. Ed." "Agricultural Mechanics Curriculum" "Floor Covering Mechanic Course of Study"
11. Lehigh County	"Cluster Curriculum Development" "Revising and Individualizing Vo-Tech Curriculums"
12. North Fayette County	"Mining and Mine Maintenance"
13. Pittsburgh Bd. of Ed.	"Health Occupations Advanced Standing and Articulation"
14. Wilkes-Barre	"Comprehensive Curriculum Development Program"

COMPREHENSIVE HIGH SCHOOLS:

1. Bradford Area High School	"Vocational Education Possibilities in the Petroleum Industry" "Voc-Tech Course in Petroleum Production"
2. Central Columbia Sch. Dist.	"Development of Modular Courses in Vocational Curriculum"
3. Chester Upland Sch. Dist.	"Law Enforcement Course of Study"

To Be Assessed By On-Site Visitation: Comprehensive High Schools Continued:

	Title of Project (s)
4. Coatesville Area Sch. Dist.	"Extension of the Development of Unified Curriculum"
	"Units in an Individualized Learning Format Which are Centered About Consumer and Homemaking Saleable Skill Activities"
5. Crawford Central Sch. Dist.	"Model Career - Oriented Curriculum by Individualizing Through Technology"
6. Erie, Sch. Dist., City of	"Updating and Implementing a Comprehensive and Consumer Homemaking Program"
	"Developing a Home Economics Program for Five Middle Schools"
	"Vocational Education Curriculum Development"
	"Development of Comprehensive Plan for Vocational Education for Handicapped"
	"Updating Home Economics in Senior High and Middle Schools"
	"Updating Home Economics Part II"
7. Harrisburg City Sch. Dist.	"Re-Direction of Homemaking Program for Inner City Students"
8. Hazleton Area Sch. Dist.	"Individual Learning Packets for Disadvantaged"
9. Kiski Area Sch. Dist.	"Vocational Curriculum Directive Development Team for Mentally Handicapped"
10. Neshaminy Sch. Dist.	"Exemplary English/Language Arts Curriculum"
11. Penn Hills Sch. Dist.	"Developing a Total Curriculum Design for Teaching Service Occupations"
12. Waynesboro Area Sch. Dist.	"Agricultural Supplies Curriculum"

To Be Assessed By On-Site Visitation:

INTERMEDIATE UNITS:	Title of Project (s)
1. I.U. #5 Northwest Tri-County	"VAULT"
	"Unifying and Individualizing Career Education"
	"Model Career Oriented Curriculum by Individualizing Through Technology"
	"Continuation and Diffusion of a Model Occupational-Oriented Curriculum"
2. I.U. #12 Lincoln	"Home and Community Adjustment Program"
3. I.U. #16 Central Susquehanna	"Vocational Assessment Program"
	"Student's Vocational Education and Training"
	"Career Development Guide Field Testing"
	"Career Education Services"
	"The State Career Education Plan for Bringing About Community Learning"
	"CSIU - Career Education Institute"
	"Project Improve"
4. I.U. #26 Philadelphia	"Consortium on Career Education to Develop Exploratory Programs"
	"Instructional Material for Skill Centers"
	"Computer Managed Instruction"
	"Implementation of the Cluster Concept in Two Vocational Areas"
	"Pre-Vocational Exploration"
	"Development of Individualized Instruction Program"
	"(PIVOT) Personalized Individualized Vocational Occupations Training"

To Be Assessed By On-Site Visitation:

COMMUNITY COLLEGES:	Title of Project (s)
1. C. C. of Allegheny County	"Development of Career Ladder in Nursing"
2. C. C. of Beaver County	"Nursing Modular Grant"
3. Butler County C. C.	"Curriculum Improvement in Drafting"
4. Harrisburg Area C. C.	"Updating Course and Curriculum Materials for Secretarial Science Career Programs Utilizing Individual Progress Instruction"
5. Lehigh County C. C.	"Individualized Instruction, Courses in Direct Current Circuits - Alternating Current Circuits - Electronics Circuits - Digital Fundamentals - Measurement Techniques - Physics for Technicians I & II - Physics for Students of Allied Health Programs"
6. Northampton County	"Automotive Technology Program"
7. C. C. of Philadelphia	"Development of Curriculum for Older Adult Workers" "Development of Curriculum in Government Service"
8. Williamsport Area C. C.	"Instructional Development for the Service and Operation of Heavy Equipment Program"

COLLEGES and UNIVERSITIES:	
1. The Pennsylvania State Univ.	"Curriculum Material Development in Agriculture" "Course of Study Project" "Competency Based Home Economics Guide" "Health Occupations Curriculum"
2. Univ. of Pittsburgh	"Dental Assistant Modules"
3. Robert Morris College	"Competency-Based Instruction in Secondary School Typing"

To Be Assessed By On-Site Visitations:

PRIVATE:	Title of Project (s)
1. Educational Projects Inc.	"Voc/Tech Education and Training Accommodating Critically Needed Skilled Manpower for the Commonwealth"
	"Allied Health Professions Project"
	"Development of Competency-Based Training"
	"Emergency Medical Training"

APPENDIX I

Product Assessment Instrument

and

Projects to be Evaluated by

Product Assessment Instrument

PHASE II
PRODUCT ASSESSMENT INSTRUMENT
(SPECIFIC EVALUATION)

Title_____

Instructions: Circle the entry in the appropriate columns for each criteria as follows:

LEVEL OF ACCEPTANCE		LEVEL OF IMPORTANCE	
Points	Category	Points	Category
0	Nonexistent	1	Low
1	Partial	2	Average
2	Acceptable	3	High
3	Ideal		

Evaluation

The product . . .	LEVEL OF ACCEPTANCE	LEVEL OF IMPORTANCE
1. evaluation gives attention to both methods and results.	0 1 2 3	1 2 3
2. includes pretest with instructions for each learning activity.	0 1 2 3	1 2 3
3. provides for student self-evaluation.	0 1 2 3	1 2 3
4. includes suitable evaluation procedures for students and teachers.	0 1 2 3	1 2 3
5. shows evidence of field testing.	0 1 2 3	1 2 3
6. is based on advice from experts, past practices, industrial standards, current task analysis, etc.	0 1 2 3	1 2 3

Regulations

The product . . .		
7. gives metric equivalents for English dimensions.	0 1 2 3	1 2 3
8. emphasizes general safety regulations.	0 1 2 3	1 2 3
9. is nondiscriminatory (sex, race, etc.).	0 1 2 3	1 2 3
10. meets copyrights requirements.	0 1 2 3	1 2 3
11. complies with confidentiality of records status.	0 1 2 3	1 2 3
12. reading level is appropriate for the target population.	0 1 2 3	1 2 3
13. grammar rules are carefully observed.	0 1 2 3	1 2 3
14. is physically appealing.	0 1 2 3	1 2 3
15. follows an acceptable writing style.	0 1 2 3	1 2 3
16. is not expensive.	0 1 2 3	1 2 3

Organization

The product . . .		
17. goal statement(s) are appropriate to the content area.	0 1 2 3	1 2 3
18. objectives are related to goals.	0 1 2 3	1 2 3
19. encompasses measurable objectives in the psychomotor, cognitive and affective domain.	0 1 2 3	1 2 3
20. scope and sequence is well organized.	0 1 2 3	1 2 3
21. has prerequisites clearly stated.	0 1 2 3	1 2 3
22. graphic representations relate functionally to the content.	0 1 2 3	1 2 3

Organization (continued)

The product . . .	LEVEL OF ACCEPTANCE	LEVEL OF IMPORTANCE
23. provides overall course list of available competencies.	0 1 2 3	1 2 3
24. includes motivational introduction statement or question.	0 1 2 3	1 2 3
25. can be adapted to class settings.	0 1 2 3	1 2 3

Methods

The product . . .

26. identifies minimum facility needs.	0 1 2 3	1 2 3
27. lists required materials, tools, equipment and supplies.	0 1 2 3	1 2 3
28. includes definitions of terms.	0 1 2 3	1 2 3
29. includes references at point of need.	0 1 2 3	1 2 3
30. has individualized learning packages.	0 1 2 3	1 2 3
31. contains suggested exercises and activities.	0 1 2 3	1 2 3
32. suggested or implied methods are appropriate.	0 1 2 3	1 2 3
33. has student self-pacing provision and open-end enrollment.	0 1 2 3	1 2 3
34. learning steps have a definite sequence.	0 1 2 3	1 2 3
35. concept levels are appropriate for the target population.	0 1 2 3	1 2 3

Directions for Scoring: Add number of circles in each column under "Level of Acceptance," multiply by point value, add subtotals and total.

No. of Circles	
Point Value	0 1 2 3
Subtotals	
TOTAL	

Final Rating: Please check the appropriate final rating.

Range	Rating Description
105-71	( ) This curriculum product is excellent and is recommended for general use.
70-35	( ) This curriculum product is average and a number of major revisions are necessary before reconsidering for general use.
34-	( ) This curriculum product is poor and should be rejected.

Suggested Recommendations for Improving the Curriculum Product

Evaluation:

Regulations:

Organization:

Methods:

Other Potential Uses of the Curriculum Product:

Signature of Reviewer _____ Date _____

CURRICULUM MATERIALS TO BE EVALUATED

WITH

PRODUCT ASSESSMENT INSTRUMENT

School	Project Title
Admiral Peary AVTS	Careers Mining Industry
I.U. #29	Carpentry (Industrial Material Cluster) Drafting and Design Masonry
Penn Hills School District	Appliance Repair Auto Body Building Trades Cosmetology Business Education Food Service
I.U.#4 Midwestern	A Pre-Vocational Thurst Secondary Vocational Students
Altoona AVTS	Computer Assisted Instructional Math Computer Assisted Instructional Algebra
Kiskie Area School District	Instructional Modules for Vocational Curriculum
Lehigh County Community College	Modular Electronics Curriculum
Philadelphia	Electricity and Electronics Building Construction Technology Architectural Drafting Printing Management Machine Drafting and Design Machine Construction Welding and Metal Fabrication Fluid Technology
Pennsylvania State University	Food Service Curriculum Design Exploring Occupations in the Natural Resources Natural Resources Technology Natural Resources in Environmental Awareness Occupational Preparation in Natural Resources
Jefferson County DuBois	Metal Fabrication Auto Body Shoe Repair Carpentry Parlimentary Procedures

Page 2. Curriculum Materials To Be Evaluated with Product Assessment Instrument

School	Project Title
Pittsburgh Board of Public Instruction	Industrial Arts Basic Electricity/Electronics
	Printing
	Electronics
	Bricklaying
	Commercial Baking 1 and 2
	Child Care and Development
	Business Law
	Carpentry
	Cabinetry
	Foods and Nutrition
	Cosmetology 1, 2, and 3
	Plumbing
	Drafting and Design Technology
	Economics (Business Education)
	Sales Merchandising Curriculum Supplement
	Food Service
	Using Math in the Shop
	Student's Handbook of Welding Symbols
Alfred Beattie AVTS	Service Station
	Drug Store
	Variety Store Retailing
	Appliance Store
	Home Furnishings
	Dairy Store
	Ladies Ready-To-Wear
	Jewelry Store
	Automobile Accessories
	Advertising
Delaware County AVTS	Welding Basic Arc - 1st, 2nd, & 3rd levels
	Printing - 1st Level Students
	Carpentry & Cabinetmaking - 1st Level Students
	Auto Machine Tool Mechanics - 1st Level Stu.
	Distributive Education - 1st Year Curriculum
	Basic Electricity & Electronics 1st Level
	Electrical Cons. & Maintenance - 2nd Level
	Electronics Technology - 2nd Level Students
	Environmental Control Technology - Phase I
	Food Preparation - 1-2 Year Level
	Dental Technology - 1st Level Students
	Photo Technology - 1st Level Students
	Dental Office Assistant - 1st Level Students
	Machine Trades - 1st Level Students
	Chemical Technology - 1st Level Students
	Commercial Art - 1st Level Students
	Cosmetology - 1st Level Students
	Sheet Metal - 1st Level Students
	Metal Fabrication - 1st Level
	Drafting and Design - 1st Level Students
	Plumbing & Heating - 1st Level Students
	Computer Programming - 2nd Level Students

Page 3. Curriculum Materials To Be Evaluated with Product Assessment Instrument

Pennsylvania State University	Machine Shop Mechanical Drafting Radio/TV Repair Electrical Occupations Plumbing Metal Fabrication Heating

APPENDIX J

Consultants Position Papers

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
Division of Occupational and Vocational Studies
RACKLEY BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

November 22, 1976

Dear

As per our telephone conversation regarding The Pennsylvania State University's research project, "Evaluation of Funded Projects for Development of Vocational Instructional Material", I am most pleased to have your participation as a consultant for this project.

I have enclosed for your review, a description of the project's first year activity, the proposed four-year objectives of the project, and a newsletter that has been disseminated to vocational educators throughout the state. As can be seen from the enclosed description, the first objective is to identify the various course of study projects presently in existence in Pennsylvania. This objective has been reached via information obtained in Harrisburg, VEIN at Millersville and State College, and surveys disseminated to area vocational-technical schools, community colleges, comprehensive high schools with vocational programs, and intermediate units. This process has enabled me to establish a very comprehensive listing of curriculum projects dating back to 1965.

As the identification process has been completed, the next step is to determine what methods could be used to identify and evaluate those components which caused curriculum projects to be successful or unsuccessful. I have listed below some issues to which you might address a written presentation; however, if you deem necessary, do not limit your response to only these issues.

1. Can you identify the location of any existing curriculum projects that you consider to be successful in terms of increasing student competency serving a greater number of students in the shortest time.

2. What are good or bad features of instructional materials, and if you were to evaluate curriculum material, what methods would you use to identify good or bad characteristics.

3. After constructing an evaluation tool, what method would best serve to complete it; on-site visitations, surveys?

4. Would you recommend that after an evaluation is determined and guidelines instructed, that a process be established to test the findings. If so, what method would you use?

Due to the diversity of the individuals who will be addressing these issues, you may find the above to be too general or specific depending on your degree of expertise. Individuals addressing this issue include personnel from universities, community colleges, private vocational schools, and secondary vocational schools. The basic question I am attempting to answer is, "How would you evaluate the effectiveness of vocational curriculum materials"?

As agreed upon in our phone conversation, I have allocated a $50.00 honorarium for your written input into this issue. If possible, I would like to have your views returned to me by mid-December at which time I will review the information and attempt to schedule a one or two-day meeting in January, if convenient. (Honorarium for meetings at PSU is $165.00 per day).

I would like to thank you for your participation in this project and am certain that your contribution will enable vocational education to take another step forward in preparing vocational students to enter the world of work.

If you have any questions concerning this project, please feel free to contact Dr. Frederick Welch or myself at (814) 865-8361.

Have a Happy Thanksgiving.

Cordially,

John J. Vincent
Project Coordinator

JJV/lah

Enclosures

Lehigh County Community College

2370 Main Street

Schnecksville, Pennsylvania 18078

Area Code 215 Telephone 799-2121

December 16, 1976

Mr. John J. Vincent
Project Coordinator
College of Education
Division of Occupational and Vocational Studies
Rackley Building
Penn State University
University Park, PA 16802

Dear Mr. Vincent:

I am forwarding a few comments concerning the curriculum material project which is being conducted by the Penn State University. The matter of developing materials which are acceptable to a large number of faculty members is extremely difficult as each tends to structure their programs based upon their experience in the field and their particular methods of teaching. Therefore, the materials must be structured to attempt to reach the greatest number of faculty members which means many compromises are required. An alternative to this would be to develop a standard curriculum with perhaps one or two options for more specific areas of instruction.

I doubt very much if we will find materials already available which will meet the needs of faculty in the state as well as the requirements of the community. Therefore, I believe we will have to take those programs which are closest to meeting the requirements and make revisions to them. I would hope that in this process we would emphasize the development of performance objectives as I believe it is through this means that we can best establish procedures for the evaluation of AVTS graduates who wish to continue their studies in a community college. This, incidentally, I believe should be a major objective of the project as I believe there is a tremendous waste of time due to the failure of community colleges to award advanced standing to AVTS graduates.

I hope to have some time in the next few weeks to take a closer look at this entire matter and perhaps extend these comments.

Tell Linda that the Elison's are eating venison this winter having three deer in the freezer.

Very Truly Yours,

George W. Elison

George W. Elison
Dean of Instruction

GWE:jef

Enclosure

Considerations For The Study Of Instructional Materials

THE PENNSYLVANIA STATE UNIVERSITY

RESEARCH PROJECT

BY

George W. Elison
Dean of Instruction
Lehigh County Community College
2370 Main Street
Schnecksville, PA 18078

December 13, 1976

1. The only curriculum materials with which I am familiar are those which have been completed at the Lehigh County Community College. These cover four instructional areas.

   a. Electronics Technology: Four subjects in electronics have been developed for individualized instruction. Performance objectives have been developed as a basis for each course. The content for the courses is based upon these objectives. It includes theory and laboratory experiments. The material is presented through 35 mm slides, cassette tapes and printed material. Pre and post tests are included.

      The following subjects are covered:

      D.C. Circuits
      A.C. Circuits
      Electronic Problems
      Digital Fundamentals

      Measurement Techniques will be completed during the 1976-77 term.

   b. Physics: Two types of courses related to occupational programs have been developed. Two levels of physics courses for the technical areas have been completed. A special physics course for students in allied health programs will be completed this year. These programs use 35 mm slides, cassette tapes, and printed materials. Theory and laboratory work are included.

   c. Technical Report Writing: This project will be completed this year. It will be structured to use experiments conducted in the technical and physics laboratories as a basis for writing reports.

   d. Electricity: Faculty members from the Lehigh County Community College and the Lehigh County Vocational-Technical School are developing a course in basic electricity for the automotive and heating trades. Modules will be developed which will be applicable to all trades. These will be supplemented by modules applicable to the specific occupations. Material will be presented by using 35 mm slides, cassette tapes and printed material.

2. The basic consideration for curriculum materials should be the extent to which the material is applicable to the occupation. It must be broad enough to provide the necessary background for a wide range of jobs. Too often, locally developed materials reflect the specialized interests of the instructor or the needs of one large local industry. Any program developed for state utilization should be reviewed by practioners from several areas of the state to prevent this.

The course outline for each course should include:

a. A task analysis.

b. Performance objectives for theory and laboratory work.

c. A topical outline, based upon the objectives, which clearly indicates the breadth and depth to which each topic should be presented. It should be structured in such a way that a new instructor or a substitute could readily fit into the program.

d. A listing of laboratory experiments showing the objectives to be achieved.

e. A bibliography of texts and reference materials.

f. A listing of available audio-visual materials.

g. Suggested supply and equipment lists for a specific number of students would be helpful, but not required. Suggested objective test questions would also be helpful.

The material should be reviewed by people with a background in curriculum construction for form. Content should be evaluated by those with expertise in the field.

3. The initial evaluation could be by an individual analysis. The people involved should then meet as a group to develop a composite evaluation. On-site visits should be conducted to determine if the program is being followed.

4. All curriculums should be evaluated to determine their appropriateness for the grade level at which they are to be presented. For example, an understanding of ohms law is a basic requirement for all students studying electricity and electronics. However, the problems submitted to community college students could be most complex than those for tenth grade students.

I would also hope that as a result of these evaluations, recommendations could be developed for community colleges to use in awarding advanced standing to AVTS graduates.

6432

MERCER COUNTY
AREA VOCATIONAL - TECHNICAL SCHOOL
POST OFFICE BOX 152 ◇ ROUTE 58 NORTH
MERCER, PA. 16137
PHONE 412-662-3000

December 14, 1976

Mr. John Vincent
Project Coordinator
Penn State University
105 Rackley Building
University Park, Pa. 16802

Dear John:

You requested my views into Instructional Materials. I am not sure that I have what you want but, I'll endeavor to transfer my thoughts on the subject hoping that they can be useful to you.

"Instructional Materials". Two words that have been bantied around quite a lot, but to which very little has been done to further the concept.

With my remarks, it isn't intended here that there hasn't been any progress in this area, only that much lip service has been given to this issue, while most have been progressing on day by day with the same old procedures.

Vocational Education has been and will continue to lead the field in developing and using individualized instructional material. The need for individual instructional material is ever present in Vocational Education because vocational instructors are required to teach one, two, or three grade levels in one class area daily. This, added to the fact that the students can be spread from very slow to very fast capability, lends more credibility to the need for individualized instructional material.

What is instructional material? Is this a teacher lesson plan? Is it identifiable material for the student to use in furthering his or her chosen field? Is it directional material to lead students step by step? Is it material that can direct students to research their subjects more thoroughly and effectively?

If you take these above areas and review them, it will be discovered that it isn't any one or any two of the areas mentioned, but rather a combination of all these areas. Yes, all of the areas, plus a few more that are not mentioned along with individualized personal directions from each instructor to each student, that is necessary to establish good instructional materials.

Instructional material can consist of written directions, verbal directions, audio tapes of prepared directions, film loops, 35mm slides, video tapes and a host of other procedures.

These are all good procedures to employ, but let us not forget one small insignificant part that makes all of the instructional material either work wonders with the students or bomb out as duds. That is the approach that the instructor takes to the instructional material and how it is utilized.

A good instructor can make poor instructional material work wonders with the students and prove wonderous results. While, on the other hand, a good instructor can take proven instructional material and make it fall flat and the students will reject it.

The instructor is the moderator who makes or breaks instructional material. A great deal of money has been spent on learning material (instructional material, learning aids, programmed material, etc.) to better the teaching process and to deliver the type of students who have all of the fundamentals of their training area.

The amount of money spent on training the teacher to utilize the prepared instructional material that is available has been very inadequate. As a result, the teachers shy away from utilizing the prepared material. Why? Very simply, they are unprepared to teach the way the instructional material is prepared.

It isn't that the prepared material isn't any good. It is just that is isn't totally prepared in the teaching style of each instructor. They then do the most logical thing, steer clear of it, because it's not their style. Then they proceed to teach the very same material their own way by reinventing the wheel all over again and again.

There is a great deal of instructional material available from many educational agencies as well as profit making organizations throughout our state and throughout our whole United States.

What is needed is to have an agency such as VEIN gather this material and make it available throughout the state for all instructors. With the instructional material added to their teaching catagory they can then make their courses more enlightening and enjoyable. They can then utilize their teaching time to individual problems that each student has, and do it more proficiently. This will make them a better teacher and make the students more knowledgeable and will add to their ability to proceed at their own speed. Their speed will be determined by willingness to accept challenges and to seek the solutions to problems that are not restricted to the fact that the instructor doesn't have the time.

To identify instructional material as good or bad is something like the farmers famous saying "It depends on who's ox is being gored". Educational instructional material comes under the same heading, it may be real good and profitable for me but you may not totally approve of it.

This proves the fact that all instructional material is useful but not totally for everyone. You have to use the instructional material as an outline or guide, and then fill it in, or mold it to your students and/your method of teaching.

You then can utilize the efforts of someone who has initiated the idea and then made it available to you, to modify it to your desires and methods.

What would you look for in instructional material? The basic premise, is the idea sound, can it be utilized in your program? If so, what would have to be done to perceive a reasonable conclusion to the lesson? Does it have the necessary qualities of introductional material (does it explain to the student what they are looking for?) Does it proceed to explain to the student what is to be done or what is to be accomplished?

There are various ways to proceed in order to devise the methods of transferring knowledge of procedures such as:

1. Demonstration
2. Review film on subject

    a. 16mm film
    b. Video tape
    c. Audio tape
    d. 35mm slides or film strip
    e. Text book
    f. Etc.

3. Perform operations to successfully complete assignment.
4. Determine success or failure of the lesson.

    a. Written evaluation
    b. Practical evaluation

5. Evaluate instructional material to determine the usefulness of student responding profitably and obtaining successful completion a measurable number of times.

To further emphasize the desire to establish a sound basis to determine good Educational Instructional objectives, Robert F. Mager in his book Preparing Instructional Objectives states "You must select procedures, content and methods that are relevant to the objectives; that cause the student to interact with appropriate subject matter in accordance with principles of learning, and finally, measure or evaluate the students performance according to the objectives or goals originally selected".

This again identifies the fact that whatever form of instructional material is used, the full compliance and intent of the instructor must be noted and represented in the instructional material and the way that it is applied and evaluated.

The instructor develops a pattern and this pattern is employed in the instructors approach, objectives and procedure of evaluation of the outcome of the learning material. Therefore, this is the reason for my statement that even though there are many approachs to the instructional procedure they have to be indivisualized for your own method. Above all, the instructor must have full understanding and belief in the instructional material to achieve maximum results from its use. You

cannot obtain instructional material from a person, school or another concern and then utilize it with the students and expect to obtain maximum results without first realizing that considerable structure changes or program orientation have to go into the preparation of its usage.

The instructor has to be wholeheartedly in favor of the instructional material and must incorporate it into his daily program for maximum success.

VEIN has done a marvelous job of gathering and disseminating instructional material as well as research into desirable learning areas for the state. This does not mean that they have totally correlated all of the possible instructional material available throughout the state, not to mention what is available in states such as Ohio, New Jersey, Texas, Minnesota, just to mention a few.

There are many Vocational Schools who are developing instructional materials such as Admiral Perry AVTS, Delaware County AVTS, Mercer County AVTS, Hazelton AVTS, Jefferson-DuBoise AVTS, Cumberland Perry AVTS, just to mention a few. I'm sure there are many more and that your research will uncover them for the others to accept.

I've received some samples of their instructional materials and I know of what we at Mercer County AVTS are doing in the line of instructional materials. This is why I've said there is a wealth of material in each one of our Vo-Tech Schools that is going without recognition. Without recognition is bad enough, but the extra effort that is going into establishing thoughts, concept, formats that have already been developed, but is unknown to any other school other than the one where it is developed is allowing considerable effort to go to waste. Thus, a more consorted effort must be made to determine where the developing of the instructional material is taking place, an effort to round up all of the instructional material and processes, and finally a method of disseminating the collected material throughout the state.

This will inturn make a more improved and a well balanced educational system throughout the state, while it will accord more time for instructors and curriculum personnel to discover new methods and process rather than reinventing the wheel again.

A good publication, that gets into almost every school is the "School Shop" magazine. However, it has its drawbacks basically because this is an Industrial Arts magazine. It doesn't have to be, there would be more articles and good transfer of instructional material if it were used more by Vocational personnel. This publication would be a good dissiminating point for new ideas in instructional material, then each instructor could take this material and expand on it with his own concepts and beliefs.

With the role played by Vocational Education in the process of Career Education, youth activities and the everpresent accountability position, we are confronted with the matter that instructional material has a more prominent role to play. This role becomes more prominent as we look at the fact that the vocational classes are becoming larger and larger, from the constant pressure that more and more students are not only wanting but demanding more vocational education. Career education is giving the students a goal to work for, thus making them more demanding

of the instructors time and energies. The classes are becoming more and more diversified in ability levels, from the very slow to the very bright. (This is relevant to Dr. John Strucks forward in "Education for Work" by Walter Benton Jones, where using William Penn's admonition, "that all children should be taught some useful trade or skill so that the poor may work to live, and so that the rich, if they become poor, may not want").

All of these factors add more and more of a burden onto the instructors little available teaching time, and causes the need to use more and more instructional materials to aid in the process of teaching such a wide and varied program.

Some of the factors that are needed in the instructional material to accomplish these tasks can be identified in the following:

1. Competency - based vocational material to aid the vocational instructors wants and expectations and to have the instructional material help to identify critical career competencies.

2. The instructional materials are needed to and are expected to provide introduction to, - provide procedure for performance tests, criterion - referenced to critical career competencies, not just to a theoretical approach to the subject.

3. There is a need for the instructional materials to have the presentation and have the student select and sequence relevant content, with emphasis on career readiness rather than nice-to-know facts.

4. The instructional materials must be individualized and self-paced and to be in line with the students ability to read or comprehend and complete.

As you can see from my remarks, instructional material is the number one priority, of any instructor or curriculum person, or it should be.

Whatever advances to improve the instructional material and then to disseminate this material, have been taken, they have not been enough. For if it is collected and not utilized, it is worthless to the originator and to all others is remains unknown.

Perhaps one last suggestion to improving the program on instructional materials would be in the manner of holding seminars in the three sections of the state. The sections are Eastern, Central and Western areas.

The State Department of Education should find a way of funding these seminars. Either utilize them at an Educational University within the three sections mentioned or hold them conditional in the areas mentioned at no credit, but cost free to the participants.

Seminars would present the various processes of not only methods of producing instructional material but equivalent procedures on how to utilize the instructional materials. Utilization of the material would make the teaching process

more interesting to the students needs, release the instructor from routine procedures that consume good teaching time, give more time to those who need the instructors individualized attention, enable the instructor to reach the goals of what the teaching position is destined to. Finally it must be stressed to the instructors that the use of learning material does not mean, that the instructor will be eleminated, or the instructional material to take the place of the instructor, but will aid the students and make the instructor a better instructor.

This indicates my philosophy on instructional materials. I hope that it proves beneficial to you and to your research. If I can be of any further assistance, please contact me.

Thank you for requesting my thoughts and I'll be looking forward to hearing from you concerning the possible dates on the two day meeting to further evaluate the collecting and disseminating of instructional material.

Yours truly,

Andrew Ruzanic,
Principal Vocational Education

AR/mw

cc

LEHIGH UNIVERSITY
SCHOOL OF EDUCATION
BETHLEHEM, PENNSYLVANIA 18015

CAREER EDUCATION
524 BRODHEAD AVENUE

December 16, 1976

John J. Vincent, Project Coordinator
Division of Occupational and Vocational Studies
Penn State University
Rackley Building
University Park, Pa. 16802

Dear John:

I enjoyed meeting and talking with you at the AVA. My response to your letter of November 22 is contained via the enclosed memo. It reads very much like our AVA conversation concerning the project. As I have indicated, the preferred dates for me to come to PSU are January 10 and 11 or 13 and 14. I'll be looking forward to hearing from you.

Have a Merry Christmas and Happy New Year.

Sincerely,

Jerry

Jerome T. Kapes
Associate Professor
Career Education

JTK:ep

Enclosure

LEHIGH UNIVERSITY
SCHOOL OF EDUCATION
BETHLEHEM, PENNSYLVANIA 18015

CAREER EDUCATION
524 BRODHEAD AVENUE

TO: John J. Vincent

FROM: Jerome T. Kapes

DATE: December 16, 1976

RE: Feedback and Input on Curriculum Evaluation Project

Each of the four major questions raised in your letter of November 22 are dealt with separately here. In addition, other general and miscellaneous comments are also provided.

Response to Question #1

a) What is a successful project? The question appears to suggest two criteria: (1) increasing student competency, and (2) serving maximum number of students in minimum time. I believe these two criteria to be too broad and not very useful for evaluation purposes. Also, what is a curriculum project? Is it only "course of study" activities or does it include almost any research and demonstration activity of an instructional nature? These and similar questions need to be answered in order to define the limits of the project so we can get a hold of it.

b) In an attempt to answer the question without the kind of information described under (a) above, the following projects come to mind:

Lehigh County AVTS	- Redesign of curriculum from 3 to 2 years
Admiral Perry AVTS	- Competency based Career Education Fluck and Lareau
Jefferson-Dubois	- Course of study project Homer Horton
Hazleton AVTS	- Career exploration and other materials Nancy Gilgannon
Pittsburgh OVT Model	- Jerry Olson
USOE Career Ed Projects	- 4 in Pennsylvania - 1973 Ebensburg AVTS, Pittsburgh, Erie and Philadelphia
Career Resource Center	- 17 in Pennsylvania evaluated by RCU

I have listed the above projects because they are the few that come to mind, not because I know them to be successful.

Response to Question #2

a) It is difficult to talk about good and bad features of curriculum in the abstract. The following continum may be helpful.

Good	Bad
Easy to use	- Hard to use
Liked by teachers	- Disliked
Liked by students	- Disliked
Inexpensive	- Expensive
Causes desirable change	- No change or undesirable change
Flexible	- Inflexible
Innovative	- Lacking innovations
Efficient	- Inefficient
Effective	- Ineffective
Can be handled by present staff	- New staff required
Does not require additional equipment	- Requires additional equipment

The above list of opposites is not exhaustive and can be extended.

b) The methods used to identify the characteristics should be determined by the nature of the project. In most cases the method will include one or more of the following techniques:

ask (interview)
observe (direct)
infer (indirect)
measure (cognative changes, attitudes, opinions, etc.)

A possible technique for measuring opinions could involve the use of the above list of opposites as a semantic differential type scale.

Response to Question #3

The methods for using the evaluation tools selected will be determined by the nature of the tool - see comments in 2b. The proposal suggests field tests with an experimental and control group, but this appears to be highly infeasible in most cases because:

a) many of the projects are completed at their original site and implementation at a new site would be highly costly to say nothing about finding a willing laboratory.
b) some projects are probably not of a nature to be tested in this manner.
c) in the rare cases where a project is currently underway, lends itself to experimental design and involves a willing constituency, the difficulties of controlled experimentation with human subjects and educational treatments would still be formidable.

It appears that on-site visitations will be necessary in any case; however, what do you do when there is no site (you could assume that the project was a failure because it no longer exists, but that would not tell you anything about why.)

Response to Question #4

I do not really understand this question; however, perhaps its answer is contained in 2 and 3 above.

Additional Comments

After some thought, it occurs to me that it is very difficult to conduct after-the-fact evaluations of curriculum projects if specific findings of successfulness are desired. This type of research has to be built into every project and I presume that it is contained in project reports. A summary of these findings may be of some use.

In the more general case of project success, it is probably best to locate the person(s) in charge and tap their ideas concerning success and failure. This could lead to some general concensus about why the projects of the last 10 years have or have not made an impact.

As an additional thought, I would suggest some dressing up of your newsletter (e.g., give it a name other than newsletter). I'm enclosing several copies of curriculum newsletters which you might find helpful.

JTK:ep

Enclosures

THE WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES

MEDIA, PENNSYLVANIA 19063

Founded 1888

January 11, 1977

Mr. John J. Vincent, Project Coordinator
Division of Occupational and Vocational Studies
Rackley Building
University Park, Pa. 16802

Dear John:

I hope that my delay in responding to your letter of November 22 will not be viewed as a lack of interest on my part. Since returning from the AVA Convention, I had to close up the fall 1976 semester and have not had an opportunity to sit down and think through your problem. Several family problems as well as the recent holiday also interfered. None the less, I have given your project some thought and will attempt herein to respond to the issues presented in your letter. After consideration of my responses, please feel free to bounce additional questions my way and I will try again to provide answers.

Relative to issue number one, I have now been at Williamson for 3.5 years which I must admit limits my contact wtih developing curriculum projects. From this somewhat restricted vantage point, I cannot identify any projects which have been conducted nor materials which have been developed under state funding which might serve as a response. No funds have been made available to schools in our sector for this purpose.

I recognize that to pose a question in response to a questions is seen in many circles as a poor response. However, such a procedure often serves well as the primer which ignites thought and provides the solution initially sought. Therefore, my response to issue number two is structured in what I hope will provoke answers to your basic questions. Consider the following:

1. Was a survey of materials extant prior to the development of the new materials conducted?
   a. Other schools?
   b. State?
   c. National?
   d. Commercial?

2. Are the materials developed for specific or general utilization?
   a. For one school?

b. For one specific program?
c. For general state utilization?
d. For use across programs?

3. Were the materials developed to be used in a traditional vocational program or for a program for a recently or a newly developing occupation?

4. Are the materials developed for terminal educational or continuing educational programs?

a. For occupational level programs?
b. For skill level programs?
c. For technical level programs?
d. For professional level programs?

5. Are materials developed for secondary, post-secondary, or continuing education utilization?

a. For formal high school utilization?
b. For formal post-high school utilization?
c. For formal continuing education utilization?
d. For informal utilization in any of these categories?

6. Are the materials developed for utilization to prepare workers for a specific labor market?

a. One geographic area?
b. One major employer?

7. Was there a study of need conducted prior to development of the materials?

a. What was its scope?
b. What was its depth?

8. Were objectives for the materials developed set as the result of the foregoing study?

9. Was a curriculum advisory committee utilized?

a. Prior to development?
b. During?
c. Following?

10. What was the structure of this Committee?

a. Educational?
b. Labor?
c. Management?
d. Combination of the foregoing.

11. Were periodic evaluations made of the materials developed to determine their utility?

a. Trial runs?
b. Test cases?

12. What follow-up of students prepared, using the materials developed, was conducted?

13. Was feed-back from follow-up employed to modify materials developed?

14. What experience in curriculum development was possessed by those who participated?

15. Was professional assistance sought?

16. How much student involvement derived during the development?

17. How complete was the finished product?

    a. Course outline?
    b. Curriculum outline?
    c. Specific course syllabus?
    d. Lesson plans?
    e. Supportive media and the like?
    f. Measurement devices, pre-tests and post tests?
    g. Was it an educational system?

18. Were completed materials published for general distribution?

    a. What is their availability?
    b. What is the demand for their use?
    c. What success have others had in their utilization?

19. Have materials been published commercially?

20. Are similar materials available commercially?

21. Are the resultant materials timely?

22. In what style (format) are the materials presented?

    a. Printed?
    b. Audio?
    c. Visual?
    d. Audio-visual?

23. Are the materials developed for a complete program as in question 18 or are they supportive such as audio-visual materials?

24. Are the materials currently being utilized for the purpose developed by those who developed them?

Your issue number three leaves me cold. What came first, the chicken or the egg? I suppose, after you have determined the procedure you will follow and what device you will use, that on-site visitations would do well if you have sufficient time, energy, and capital. However, the latter not generally being available, you will most likely be forced to resort to a survey via mail. At this juncture I fear that a measure of validity in your final result will be lost. When you depend on the evaluation of any product by those who conceived, nurtured, developed, and produced the product, the resultant evaluation is questionable. Perhaps you could use a survey, ask for samples of the finished product, develop a device to further evaluate the samples, and make random on-site visitations as well.

As with issue number three, I am again perplexed relative to issue number four. Chicken or egg. Certainly you must establish a process to test the findings. Why else would you go to all the trouble in attacking issues one thru three. At this point, I cannot suggest the method until I know if I have a chicken or an egg.

I do not pose any of the foregoing as a comedian. I am truly serious and will be happy to discuss the project further at your convenience either through correspondence, via telephone, or together over coffee. I'll buy.

Very truly yours,

Donald E. Harris

Donald E. Harris, Ed. D.
Director of Education

DEH/amh

548 Westminster Avenue
Swarthmore, Pa. 19081
December 13, 1976

Mr. John Vincent
The Pennsylvania State University
Rackley Building
University Park, Pa. 16802

Dear Mr. Vincent:

Your letter of November 22, 1976 was quite a challenge. In a brief way I will attempt to answer your questions with a succinct statement and specific numbered responses related to your four questions. There will be no restatement of your questions. After you've had an opportunity to digest the responses, feel free to telephone me to clarify any statements.

Curriculum materials is taken to mean individual course information organized in written, audio taped, or filmed form to be used by instructors and students in the learning experience.

The evaluation of vocational curriculum materials should demand the same rigor as that required of any organized body of knowledge. Vocational materials also demand the quality of "immediacy" (they are developing demand occupational skills) and these assume the vocabulary of the occupation rather than create a unique set of terms. The students who use vocational curriculum materials generally represent students from the mid to lower range of learning abilities. Trade and industrial teachers who use the materials often lack extensive pedagogical preparation.

With these constraints in mind there appear to be nine standards for vocational materials which should be considered in their evaluation:

1. Materials should be drawn from a comprehensive occupational analysis and updated minimally every five years.

2. Every major element of the materials package should include a clearly stated learning goal, a pre-evaluation instrument, individually paced learning guides and a post-evaluation instrument.

3. Materials should have clearly identified standards; age and reading levels, prerequisites, materials required, equipment and tool lists, and expected time line for learning mastery.

4. Guides should be included for use by teachers.

5. Materials should be developed in loose-leaf fashion to facilitate up-dating (also included in each major element package should be a "bill of materials").

6. Materials should be reproducible by methods common to the institituon using such information.

7. Persons responsible for creating materials should be clearly identified sc user questions can be directed and appropriate responses obtained.

8. Special skills of teachers presenting materials must be noted; including particular safety instructions.

9. Materials, products or services resulting from the learning material activities should be as nearly like the occupation as possible.

Note: These of course may not permit many materials which have potential for contributing significantly to ever reach the "stamp of approval" stage. As a result it might be well to examine materials by course title. The highest ranking against a prearranged scale would be the material package to be refined and brought up to the optimum criteria level identified above.

The four questions you posed are answered briefly:

Question 1. There are few examplary curriculum projects that last either beyond the funding or initiator stage. The ones that I have researched and found outstanding are the Pittsburgh Project operated by Drs. Olsen and Lamping; the Philadelphia Project to film and audio reccrd occupational operations; the Chester Project (Type "C") operated by myself in Chester. Outside of Pennsylvania there are some fine materials being generated by V-Techs, Mid-America Consortium, Far-West Consortium, and the State of Michigan.

Question 2. Trained evaluators should visit centers where curriculum materials have been generated and are being used. In addition follow-up with graduates who have learned from the materials and employers who have hired the graduates should be carried out.

Question 3. Hire a group of leaders in vocational education who have been recognized as innovators and developers of course materials to create and test an instrument

Question 4. The instrument created should be accepted by the State Board for Vocational Education and included in the State plan for use in evaluation of programs and materials.

I've also included the guidelines recommended for use by the Vocational Curriculum Advisory Committee of Pennsylvania which you may have obtained from Dr. Wright.

Best regards on your project.

Sincerely,

Robert D. Klingler

Enclosures:
Appendix F & G

APPENDIX K

Edition of Newsletter

NEWSLETTER 1977

The Pennsylvania State University
Division of Occupational & Vocational Studies
Vocational Industrial Education Projects

This is the first newsletter in which we have combined the reporting of activities from several of our projects. We have previously published individual accounts periodically and will continue to compile end of project research reports on each of our projects, but with this present effort, we will provide project information of interest to those of you in the field on a more timely basis.

We have four major projects on which we will report. They are:

Evaluation of Funded Projects
John Vincent 1

Occupational Development
Richard A. Holodick 3

Course of Study
Jane A. Jantzer 4

Occupational Competency Evaluation Program
Gerald W. Funk 6

These projects are under the direction of Dr. Frederick G. Welch, Division of Occupational and Vocational Studies, 103 Rackley Building, The Pennsylvania State University, University Park, PA 16802, (814) 865-8361.

EVALUATION OF FUNDED PROJECTS FOR DEVELOPMENT OF VOCATIONAL INSTRUCTIONAL MATERIALS

As emphasized in our last newsletter the major objective of the above named project is to develop a "sharing of knowledge" between local districts through various activities designed to upgrade the direction and form of curriculum materials in vocational education.

The first step in carrying out this objective was to identify state or federally funded vocational curriculum development projects that have taken place in the past ten years. This activity has been accomplished through information obtained at the Department of Education, the VEIN system at Millersville State College, and surveys to local AVTS, community colleges, intermediate units and comprehensive high schools with vocational programs.

Through the information collected it has been learned that there were 1,198 vocational curriculum development projects from the 1970-71 school year to the 1975-76 school year. These projects were recorded as having utilized $7,794,610.00 in local and federal/state funds for the purpose of curriculum development. Prior to the 1970-71 school year the information obtained identified only 8 major projects from the 1965-66 to 70-71 utilizing an additional $1,887,162.00. Presented below is a breakdown of the year, the funding source, the number of projects and the amount of funding.

Year	Source	No. of Projects	Amount of Funding
1975-76	Part B	53	$ 490,291.00
	Part A	3	3,580.00
	Part G	2	1,575.00
	Part F	51	145,381.00
1974-75 (carry overs)	Part B	15	49,256.00
	Part F	56	60,173.00
1974-75	Part B	50	704,531.00
	Part A	5	8,305.00
	Part F (Regular)	2	11,665.00
	Part F (Disadvantaged)	20	Unknown
	Part G	2	5,248.00
1973-74 (carry overs)	Part B	5	52,186.00
	Part A	1	3,271.00
	Part F	26	110,131.00
1973-74	Part B	93	1,389,261.00
	Part A	17	167,276.00
	Part F	46	209,502.00
1972-73 (carry overs)	Part B	22	216,028.00
	Part F	33	105,714.00
	Part A	8	15,800.00

Year	Source	No. of Projects	Amount of Funding
1972-73	Part B	43	$ 401,231.00
	Part A	6	17,428.00
	Part F	76	126,648.00
	Part G	3	1,625.00
1971-72 (carry overs)	Part B	31	232,857.00
	Part F	1	589.00
	Part G	2	9,530.00
1971-72	Part B	101	760,787.00
	Part A	10	26,921.00
	Part D	2	10,517.00
	Part F	114	302,005.00
	Part G	19	16,837.00
1970-71 (carry overs)	Part B	23	127,851.00
	Part A	1	12,550.00
	Part G	9	29,307.00
	Part F	55	136,253.00
1970-71	Part B	136	1,255,752.00
	Part G	12	46,913.00
	Part F	26	111,914.00
	Part A	5	92,972.00
1972-1976	Part D	4	77,483.00
	Part C	9	252,466.00
1965-1971	Part C	8	1,887,162.00
Totals		1,206	$ 9,681,772.00

As can be seen from the above summary a considerable amount of effort has been expended for the development of vocational instructional materials. There is obviously a vast amount of materials already in existence which can be utilized by local districts and the next phase of the project is to select sites which will be visited to determine what characteristics exemplify good instructional materials.

In the next 3-4 months there will be 43 on-site visitations and 21 telephone surveys conducted to various locations throughout the state. At each site the project staff will complete evaluation instruments in the form of an opinionaire and a product assessment instrument to determine the effectiveness of the material developed by the local district.

It is hoped that through these efforts suggested guidelines can be developed to benefit all of vocational education in the area of curriculum development. In the near future I am looking forward to meeting and talking with those of you who have been involved in the development of curriculum materials. Many thanks to the personnel from the Department of Education, universities, AVTS, private schools

and community colleges who have provided suggestions in the development of the project.

Any comments or questions on this project, please contact: John Vincent, Project Coordinator, (814) 865-8361.

COORDINATING THE WORK EXPERIENCE ASPECT OF THE UNDERGRADUATE VOCATIONAL EDUCATIONAL PROGRAM

The project was funded to coordinate the work experience aspect of the undergraduate vocational-industrial activity, with the occupational competency examination requirements. A handbook containing all of the occupational specialities to be taught in the vocational-technical programs is being developed. The document will contain a description of the course, certificate title number, an outline of methods of completing the learning/apprenticeship period and the length of the learning/apprenticeship. Also, there will be a breakdown of the competencies for that occupational area and the approximate percentages these competencies are covered in the occupational competency exam. The prospective teacher will have, upon reading the competency list, a general idea of the various areas of their trade and the percentage of questions/performances that will be included in the exam. To date 60 percent of the occupational areas are complete.

Another aspect of this project is a review board, comprised of the persons responsible for the trade competency examination, the I. Ed. 399 occupational development instructor, and the adviser of the student who will appear before the review board. The review board process takes place a minimum of two times in the undergraduate's program--the first after completion of one year working experience and the second prior to taking the occupational competency examination. To date six undergraduate students have experienced the review board process. Both students and advisers have agreed that this method of evaluation of the student's strengths/weaknesses and outline of what procedures should be followed for program completion have been most beneficial.

A job bank is being developed of employers who have participated in the past in hiring the undergraduate vocational students to complete their on-the-job occupational development. Included will be new employers as identified by the university cooperative education project.

To conclude project 8978 P.D.E., VIED: The project is seventy-five percent complete and has met the objectives set forth and has brought about vast improvements in the undergraduate delivery system. The process/materials developed through the seed monies provided will become a permanent part of the organizational structure and will be improved and revised as the program progresses.

Any comments or questions on this project, please contact: Richard A. Holodick, Project Director, (814) 865-8361.

COURSE OF STUDY PROJECT

This is the third in a series of newsletters distributed by this University on the Course of Study Project. The first brought our committee members up to date with the operation of the project and this one being for those cooperating with us and our committee members.

The Course of Study Project is being conducted through the Program of Vocational Industrial Education, Pennsylvania State University in cooperation with the Bureau of Vocational Education, Pennsylvania Department of Education, Harrisburg. It is aimed at producing a framework for trade instruction throughout Pennsylvania. To develop the framework for a course of study, we obtain from our teachers in the field the important basic skills of a trade and then systematically combine them with jobs. Thus, the student, through the performance of jobs in proper sequence, will be introduced to the skills of the trade.

The material in each course has been arranged in major divisions of the trade, in most cases starting with the simple basic skills and developing into the more difficult complicated skills in the division. Each course includes Job Sheets and Skill Competency Sheets. The skill competency sheets are simply written and highly illustrated. They outline the manipulative handling of tools and materials in the trade. The job sheets are arranged in an order that gradually exposes the skill competencies. The purpose of the job sheet is to insure the introduction of each operation or skill competency in a controlled manner.

The teacher can use this course of study either as a framework, to which he or she can add jobs to individualize the course to meet local needs or as a supplement, to which he or she can pull jobs and operations from, to make his/her own course more complete.

As it stands now on courses completed, we have quite a few in their final stages prior to printing. Those courses which are completed and already distributed to the field are:

Machine Shop
Mechanical Drafting
Radio/TV Repair
Electrical Occupations
Heating--we are now mailing
Plumbing
Metal Fabrication

Small Engine Repair--is at the printers now; we expect to have it mailed by March 1977.

The following committees have finished their courses but final corrections and drawings remain to be done, then a final approval from The Bureau of Vocational Education (BVE) before they are printed.

Carpentry--at BVE for final approval, we expect to print in March 1977 and mail by April 1977

Sheet Metal--hopefully will be approved in March 1977

Presently our active committees and their proposed printing dates are:

Auto Body and Fender (6/30/77)	Painting and Decorating (12/77)
Commercial Art (6/30/77)	Upholstery (12/77)
Building Trades Maint. (6/30/77)	Welding (12/77)
Graphic Arts (6/30/77)	

Committees to be active by July 1977 are:

Automotive Mechanics	Diesel Mechanics
Building Construction Trades	Refrigeration
Masonry	Appliance Repair
Industrial Electrician	Architectural Drafting

All material existing from the above committees will be up-dated and completed. We expect that these committees work will be completed by June 30, 1978.

In July 1978 the following committees will be activated:

Brick Masonry	Materials Handling
Computer Technology	Millwork/Cabinetmaking
Electronics	Textile Production
Electronic Communications	Tool and Die Making

Hopefully these committees will finish by 6/30/79. In July 1977 we will start on four new titles assigned by the Bureau.

The completion goals do not include approvals from The Bureau of Vocational Education or time for editing and printing unless otherwise indicated. These goals are set strictly for the committee work. When the committee work is done, the rough work is edited and typed (2 weeks); pictures drawn (time varies depending on size of course--2 weeks minimum); sent to BVE for approval (3 weeks); final corrections are made, page numbers typed and pictures cleaned (1 week minimum); then is printed (4-6 weeks). The committee work is the first, largest and most important step towards the completion of the course, the rest is strictly routine (but takes time) and follows when the committee has finished. When the courses are sent to The Bureau of Vocational Education each committee member will also receive a copy to approve. This will enable each member to see the completed course of study in final form.

We are very grateful to all who have contributed their time and efforts to this project. Many have made sacrifices of their own personal time for the progress of the project.

Any comments or questions on this project, please contact: Jane A. Jantzer, Research Technician, (814) 865-8361.

OCCUPATIONAL COMPETENCY EVALUATION PROGRAM PROJECT (OCEP)

The occupational competency evaluation program project is involved with standardization of OCEP activities. The program is conducted throughout the state, development of new tests, validation studies for new test development, continuous analysis of all tests administered, conduct workshops for content committees developing examinations and conduct annual workshops on examining practices for all OCEP examiners in Pennsylvania. Each of the foregoing is a separate activity, having a close relationsnip to the others, and all are part of the coordinated activities to improve the occupational competency evaluation program for Pennsylvania.

Standardization

Standardization is developed through a procedures committee of the three institutions involved, i.e., University of Pittsburgh, The Pennsylvania State University and Temple University, and The Bureau of Vocational Education. Guidance is received from a number of sources, not only from higher levels, but laterally as well. When one considers that each of these institutions services a different region of the state, the need for standardization becomes apparent.

One of the early standardization actions was to improve the quality of test instruments. This has been an ongoing program now for several years during which the quality of the testing has been considerably improved. To reach this goal, guidelines for test development were developed and provided to test development content committees, after review and modification by the institutions involved, i.e., Pitt, Penn State and Temple, and The Bureau of Vocational Education. The guidelines are explicit on the process used during development and for the content and quality of the desired end product. Statistical studies of testing so developed confirms the value of these standardization actions.

Requirements for test development are:

1. Revise (or develop) testing on a five year cycle.

   This is necessary due primarily to changes in technology. We have found that some titles require a more frequent update and a constant review is conducted to insure that these requirements are met.

2. Develop testing for occupations having a requirement of five administrations statewide each year, (average).

   Many people consider that testing should be developed for every occupation for which certification is required. With 103 occupations in the Trade and Industrial area, we can readily see the magnitude, not only in developing testing, but in maintaining current state-of-the-art instruments. This is not insurmountable, but considering the cost of approximately $10,000 and approximately one year for developing each test, it is considered more appropriate to limit the occupations for which testing will be maintained. Tradespersons applying for evaluation of competency, and for which testing is not available, are subjected to an oral evaluation. Information on this process is found in the attachment to this newsletter.

3. Test development committees are to be composed of highly qualified, certificated teachers/tradespersons and a testing coordinator. A minimum of three occupational content persons are to be included in each committee. We find that teachers working on the course-of-study project have developed an in-depth understanding of the occupation that surpasses most content persons and our test development committees usually include persons from this project.

Test instruments include the following which must be developed by the test development committees.

1. Written test of 180 to 200 multiple choice questions.

2. Performance test of a job or jobs representative of competency in the occupation and which can be completed in four to five hours.

On the surface this may appear to be relatively simple and easy. The process at arriving at these end products however requires:

1. An occupational analysis - based on the occupational description as published by The Bureau of Certification and The Bureau of Vocational Education.

2. Validation of the key elements in the occupation.

3. Categorizing of the occupation for both the written and performance testing.

4. Proportioning the categories in relation to the total occupation.

5. Describing the activities that take place in each category.

   The foregoing, (3, 4 and 5), provide the scope of the examination, which is published for interested persons, and it is also the basis for the range of content in the written and performance tests.

6. Develop written multiple choice questions having four choices. The number of questions assembled in each category relate to the proportion of the category to the total occupation. For example, if the first category is 10% of the total test, then 10% of the test questions relate to the first category. Sub-categories are also identified, proportioned and applicable questions developed. A total of 400-600 questions are prepared of which 180-200 are used in the test, with the remainder forming a bank for multiple forms of the written examination.

7. Develop performance examiners' job sheets. These are detailed, with the process or procedure for satisfactory completion outlined.

8. Develop evaluation criteria for key elements of each performance job.

9. Develop candidate instructions and job sheets.

10. Prepare a master listing of tools, equipment, materials for the performance test.

11. Prepare detailed, standardized examiner instructions.

Other standardization actions on which we will report relate to validation studies, test administration, and diagnostic studies. A larger number of standardization actions relating to the total OCE program are reflected in the attached information brochure.

Test Development - 1976-77 School Year

The Bureau of Vocational Education had originally scheduled test development in four titles for 1976-77. This schedule applied to each of the institutions, Pitt, Penn State and Temple, but subsequent actions reduced development to the following.

University of Pittsburgh	Welding Building Trades Maintenance (May substitute Audio-Visual Communications)
The Pennsylvania State University	Scientific Data Processing - (update) Appliance Repair - (revise) Radio/TV Repair - (revise) Refrigeration - (revise)
Temple University	Power Sewing Commercial Art

Temple University completed work on Power Sewing early in the year, while a hold was placed on other development until clarification of National Occupational Competency Testing Institute (NOCTI) test titles was determined. Because of the potential use of certain NOCTI examinations, development of examinations did not resume until February, 1977.

Statistical Studies

There are two areas in which we are working. The first is to validate testing developed last year, in which the written questions are administered to 40 senior students and 10 teacher/tradespersons in the occupation. This provides enough people in the occupation to do a respectable item and test analysis. The students are reasonably knowledgeable in the trade, but without actual work experience whereas the trade teacher/tradespersons have completed both learning and work experience. Our past research in this area points out the importance of work experience since teacher/tradespersons average up to 33 percent better than senior vocational students. We find that students do well enough to evaluate each item and measure difficulty when combined with teacher/tradespersons.

Test titles being validated are:

Air Conditioning/Refrigeration	Materials Handling
Appliance Repair	Power Sewing
Electrical Occupations	Radio/TV Repair
Industrial Electricity	Textile Production/Fabrication

Testing has been completed at Dauphin County AVTS and Reading-Muhlenberg AVTS. A large number of schools must still be visited to permit the project to be completed by the end of April. The cooperation and support of the schools participating in this research is outstanding and very much appreciated. The effect represents a pooling of resources to further the aims of vocational education.

A second part of our statistical studies is to compile results on optical scan sheets of every person taking each Pennsylvania examination. Temple University and University of Pittsburgh forward data to us, which is combined with the Penn State data and processed by Penn State examination services. Results are analyzed by statisticians to identify areas of individual test requiring improvement and results are used to update testing instruments.

Test Development Workshops

Workshops for persons developing testing have been conducted for those working on Penn State test development. We had originally intended that all test development persons in the state would attend a workshop at Penn State, but circumstances have prevented this consolidated workshop. Workshops will now be conducted separately at Temple University and University of Pittsburgh for test development.

Examiners' Workshop

A workshop for performance test examiners is scheduled for June 27 and 28, 1977 at Penn State. The workshop this year will accommodate 60 persons, 20 each from Temple, Pitt and Penn State. It is expected that 20 occupations will be represented, with the final listing to be published following approval of titles by the OCEP coordinators at the three institutions.

This examiners workshop is a continuation of the standardization activities for the OCE program and will be the third examiner's workshop to be conducted. The goal is to have every examiner in Pennsylvania attend a workshop prior to administering examinations and by so doing will improve examining practices.

Examining practices is also of interest and concern to the NOCTI program. We have been informed that NOCTI has scheduled a seminar for this purpose at Ames, Iowa in April and we expect NOCTI to be represented at our June workshop. Further information will be published as it becomes available.

National Occupational Competency Testing Institute (NOCTI)

This is an activity organized through a consortium of states to develop quality instruments to assess occupational competency at a national level. NOCTI had been associated with Educational Testing Service (ETS) at Princeton, but is

now located at Albany, New York. Pennsylvania, while not a full fledged consortium member had contracted to use 10 NOCTI examination titles and recently added five additional titles to the listing of NOCTI examinations to be used in Pennsylvania. Comment on NOCTI is included in this newsletter because of our increased involvement.

NOCTI currently has 24 test titles in their listing. They are interested in adding to their inventory and have expressed interest in acquiring 12 Pennsylvania developed tests. Two titles, Scientific Data Processing and Building Trades Maintenance, are high on their list for acquisition and NOCTI is moving in this direction. NOCTI does considerable additional work on examinations to insure that they meet national requirements, but the basic development practices parallel those we require in Pennsylvania. We will continue comment on NOCTI involvement as it progresses.

If you have comments or questions on this project, please contact: Gerald W. Funk, Research Assistant, (814) 865-8361.